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*Perspectives in Disease Prevention and Health Promotion*

**Coronary Heart Disease Attributable to Sedentary Lifestyle — Selected States, 1988**

During 1987, coronary heart disease (CHD)\* accounted for 27.5% of the 2.1 million deaths in the United States (1). Well-documented risk factors for CHD include sedentary lifestyle, elevated serum cholesterol, cigarette smoking, hypertension, diabetes, and obesity (2,3). This report uses data from the 1988 Behavioral Risk Factor Surveillance System (BRFSS) and the 1976–1980 Second National Health and Nutrition Examination Survey (NHANES II) (4) to estimate the number of persons at risk for CHD due to sedentary lifestyle and to compare the prevalence of this risk factor with other risk factors for CHD.

The 37 state health departments participating in the BRFSS used standard questionnaires and methods to conduct monthly random-digit-dialed telephone interviews of adults  $\geq 18$  years of age (5). For the BRFSS, sedentary lifestyle was defined as no physical activity reported or irregular physical activity reported (i.e., fewer than three times per week and/or  $< 20$  minutes per session). NHANES II, a nationwide probability sample of 28,000 persons aged 6 months to 74 years, described the relationship between age and cholesterol levels for men and women aged 20–57 years; because this sample used direct serum measurement instead of self-report to record cholesterol levels, it provides the best national estimate for this CHD risk factor.

In the BRFSS survey, sedentary lifestyle was the most prevalent (58%) modifiable risk factor for CHD reported, followed by cigarette smoking, 25%; obesity, 22%; hypertension, 17%; and diabetes, 5% (Figure 1). Based on NHANES II, the estimate for serum cholesterol levels  $\geq 200$  mg/dL among persons 20–74 years of age was 31%.

To reduce the burden of CHD attributable to sedentary lifestyle, 13 states<sup>†</sup> are promoting physical activity as part of comprehensive cardiovascular disease prevention programs. Based on a median adjusted<sup>‡</sup> relative risk of 1.9 (2) (i.e., sedentary persons are approximately twice as likely as physically active persons to die from

\**International Classification of Diseases, Ninth Revision (ICD-9)*, rubrics 410–414, 429.2.

<sup>†</sup>Alabama, Colorado, Florida, Maine, Missouri, New York, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Washington, and West Virginia.

<sup>‡</sup>Adjusted for other selected known risk factors for CHD.

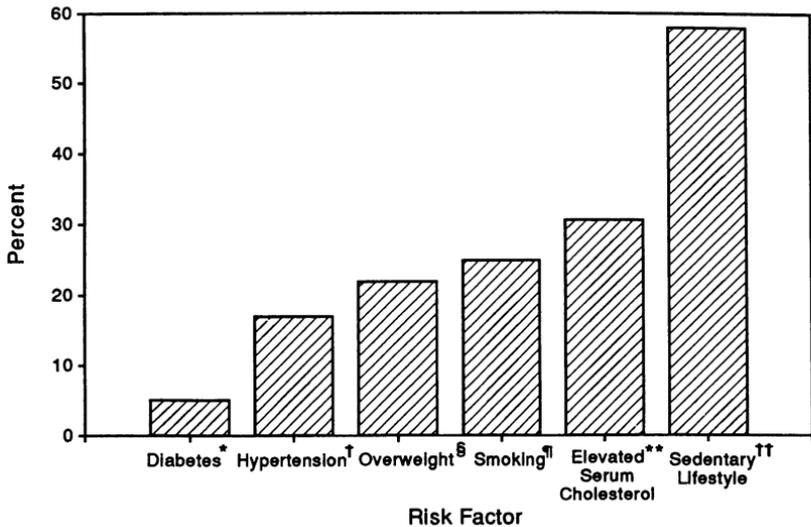
*Sedentary Lifestyle – Continued*

CHD) and the reported prevalence of sedentary lifestyle ranging from 45% (Washington) to 74% (New York), the percentage of CHD deaths attributable to sedentary lifestyle for these 13 states is 29%–40% (Table 1). Based on population-attributable risk (PAR) (6), the estimated number of preventable CHD deaths (i.e., deaths that might have been prevented if this risk factor had not been present in each of the 13 states) ranged from 1130 (Rhode Island) to 22,225 (New York).

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**Editorial Note:** These data underscore the high prevalence of sedentary lifestyle and suggest that CHD could be reduced considerably if the U.S. population became more physically active. The estimated number of preventable CHD deaths calculated from these data are substantial; however, the data must be interpreted with caution. The relative risk used in the PAR calculations is a median value obtained from a review of 43 published studies and is adjusted for other selected CHD risk factors, indicating a substantial independent risk for CHD for persons with sedentary lifestyle. However,

**FIGURE 1. Prevalences of modifiable risk factors for coronary heart disease – Behavioral Risk Factor Surveillance System, 1988, and Second National Health and Nutrition Evaluation Survey (NHANES II), 1976–1980**



\*Respondent self-reported having been told by physician that respondent has diabetes.

†Respondent self-reported having been told by a physician that blood pressure is high on multiple checks, or respondent is on medication for high blood pressure.

‡Based on body mass index  $\geq 27.8$  for men and  $\geq 27.3$  for women from self-reported height and weight of respondent.

§Respondent self-reported currently smoking.

\*\*Measured  $\geq 200$  mg/dL by NHANES II.

††Respondent self-reported no physical activity or irregular physical activity (i.e., fewer than three times per week and/or  $< 20$  minutes per session).

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the number of estimated preventable deaths attributed to each factor may not be added to estimate the total population burden of specific CHD risk factors unless the relative risk for each factor was adjusted for the presence or absence of the others. In addition, for a more precise estimate of the number of preventable deaths and years of potential life lost, age-specific data, when available, should be used to describe the prevalence of and relative risk for sedentary lifestyle and CHD death rates. Also, the apparent effects of sedentary lifestyle may be influenced by other, unmeasured risk factors that may not be modifiable by increasing physical activity.

In addition to its beneficial effect on CHD, physical activity confers other important health benefits. Regular physical activity reduces the incidence of, or is otherwise beneficial to, hyperlipidemia, obesity, noninsulin-dependent diabetes mellitus, osteoporosis, psychological impairment (7), colon cancer (7), stroke (8), and back injury (9).

Several of the 13 state programs to reduce the risk for CHD attributable to sedentary lifestyle are in the planning phase; others already have implemented walking campaigns, worksite activity competitions, and media campaigns to increase awareness and participation. Two handbooks on the promotion of physical activity in the community have been published (10,11); both emphasize a community-based

**TABLE 1. State-specific age-adjusted\* coronary heart disease (CHD) mortality<sup>†</sup>, 1987, and prevalence of sedentary lifestyle with associated population-attributable risk (PAR)<sup>§</sup>, 1988 – selected states**

| State          | CHD        |        | Sedentary <sup>¶</sup> lifestyle |                      | PAR (%) | Estimated preventable deaths |
|----------------|------------|--------|----------------------------------|----------------------|---------|------------------------------|
|                | No. deaths | Rate** | (%)                              | 95% CI <sup>††</sup> |         |                              |
| New York       | 55,702     | 229.5  | 73.7                             | ± 3.1                | 39.9    | 22,225                       |
| West Virginia  | 5,766      | 226.4  | 65.9                             | ± 2.6                | 37.2    | 2,145                        |
| Ohio           | 28,522     | 209.6  | 63.2                             | ± 2.9                | 36.2    | 10,325                       |
| South Carolina | 7,155      | 204.6  | 65.9                             | ± 2.6                | 37.2    | 2,662                        |
| Tennessee      | 12,283     | 204.2  | 67.3                             | ± 2.2                | 37.7    | 4,631                        |
| Rhode Island   | 3,062      | 203.2  | 64.9                             | ± 2.5                | 36.9    | 1,130                        |
| Pennsylvania   | 35,230     | 201.3  | §§                               |                      | §§      | §§                           |
| Maine          | 3,335      | 199.3  | 58.5                             | ± 2.9                | 34.5    | 1,150                        |
| Missouri       | 13,711     | 184.8  | 59.0                             | ± 3.0                | 34.6    | 4,744                        |
| Florida        | 38,170     | 182.5  | 52.7                             | ± 2.9                | 32.2    | 12,290                       |
| Alabama        | 8,472      | 169.9  | 57.8                             | ± 2.9                | 34.2    | 2,897                        |
| Washington     | 8,928      | 164.3  | 45.2                             | ± 3.0                | 28.9    | 2,580                        |
| Colorado       | 4,918      | 154.7  | ¶¶                               |                      | ¶¶      | ¶¶                           |

\*Age-adjusted to the 1980 U.S. population.

<sup>†</sup>*International Classification of Diseases, Ninth Revision (ICD-9)*, rubrics 410–414, 429.2. Data from CDC's National Center for Health Statistics (1).

<sup>§</sup>Based on data from the Behavioral Risk Factor Surveillance System (BRFSS), 1988.

PAR = {prevalence estimates [PE] × [relative risk (RR) - 1]} ÷ [PE × (RR - 1) + 1].

<sup>¶</sup>Defined as no physical activity reported or irregular physical activity reported (i.e., fewer than three times per week and/or <20 minutes per session).

\*\*Per 100,000 population.

<sup>††</sup>Confidence interval.

<sup>§§</sup>Pennsylvania initiated the BRFSS in 1989. No 1988 data available.

<sup>¶¶</sup>Colorado initiated the BRFSS in 1990. No 1988 data available.

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approach and may be useful to public health officials as a resource for both ongoing and new health promotion programs that target sedentary lifestyle.

The current challenge is to effectively target sedentary lifestyle and subsequently reduce the risk for CHD and other chronic diseases associated with physical inactivity. Improved coordination of existing programs, new research, and expanded demonstration projects are needed to meet this challenge. The year 2000 national health objectives will provide guidance for increasing physical activity and fitness (12).

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*Current Trends***Occupational Homicides among Women – United States, 1980-1985**

In 1985, CDC's National Institute for Occupational Safety and Health (NIOSH) initiated the National Traumatic Occupational Fatality (NTOF) project, which provides surveillance of work-related traumatic deaths using data from death certificates (1). During 1980-1985, NTOF indicated that an estimated 7000 fatal work-related injuries occurred each year; >13% of these deaths resulted from homicide (defined as death resulting from injury purposefully inflicted by another person). Among U.S. working women, who represent 47% of the U.S. workforce, homicide was a leading manner of

*Homicides – Continued*

death from occupational trauma, accounting for 42% of fatal injuries at work. Among men, 12% of occupational fatalities were homicides. This report presents information on the number and rate of homicides among women at work during 1980–1985.

During 1980–1985, NTOF records\* from 46 states† and the District of Columbia identified 950 female homicide victims (mean: 158 per year). The 6-year average annual workplace homicide rate was 4.0 deaths per million working women, with a high of 4.8 per million in 1980 and a low of 3.6 per million in 1985. Rates for other years were: 1981, 4.4 per million; 1982, 4.4 per million; 1983, 3.7 per million; and 1984, 3.6 per million.

Victims were 16–93 years of age (mean: 38 years), accounting for 25,787 years of potential life lost before age 65 (YPLL) (an average of 27 YPLL per woman). Women aged 20–34 years accounted for the largest proportion (46%) of victims, with homicide rates of 4.5 deaths per million working women aged 20–24 years and 4.3 deaths per million working women aged 25–34 years. Women  $\geq 65$  years of age had the highest age-specific homicide rate (an average annual rate of 11.3 deaths per million working women). The average annual workplace homicide rate for white women was 3.7 deaths per million working women; the rates for black women and women of other races were 6.3 and 7.4 deaths per million working women, respectively. The rate for women of other races was based on small numbers (48 fatalities). Forty-four (92%) of these women were Asian; 22 owned, managed, or worked in retail food establishments such as markets, groceries, and bakeries.

The most common cause of death was assault by firearms: 609 (64%) women died from gunshot wounds. In addition, 181 (19%) women died from stabbings and slashings; 69 (7%) from asphyxiation; 57 (6%) from blunt force injuries; and 34 (4%) from fires, explosions, motor vehicle crashes, poisonings, sexual assaults, or other causes. Gunshot wounds were the most frequent cause of death for women in all age groups from 25 to 54 years of age; in contrast, stabbings and other injuries involving physical contact (e.g., asphyxiation or blunt force trauma) were more common among women  $\geq 65$  years of age.

Three hundred eighty-nine (41%) of the women were employed in retail trade; the annual homicide rate in this industry was 8.3 per million working women. In comparison, although 186 (20%) of the victims were employed in service industries, the service sector homicide rate was 1.9 deaths per million working women per year. Six hundred seventy-five (71%) of the victims were employed in one of four occupational categories: sales personnel (179 [19%]); clerical workers (172 [18%]); service employees, which includes public safety employees, (172 [18%]); and executives/managers/administrators, which includes many self-employed women, (152 [16%]).

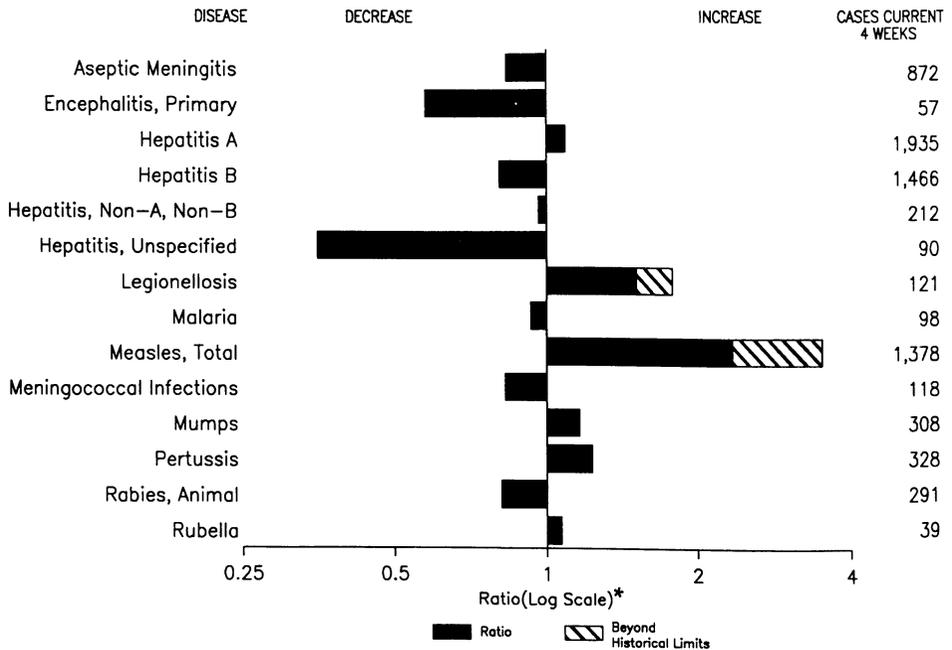
The mean number of homicides per month (based on the mean number of cases per day each month), peaked from December through March and, to a lesser extent,

*(Continued on page 551)*

\*The NTOF database contains information from death certificates provided by the 50 states and the District of Columbia that meet the following criteria: 1) death was related to external causes (*International Classification of Diseases, Ninth Revision*, rubrics E800–E999), 2) the decedent was  $\geq 16$  years of age, and 3) the injury occurred at work.

†No information on workplace homicides was included in the NTOF data base from Louisiana, Nebraska, New York, and Oklahoma because, when these data were collected, each had death certification procedures that precluded obtaining this information.

**FIGURE I. Notifiable disease reports, comparison of 4-week totals ending August 11, 1990, with historical data — United States**



\*Ratio of current 4-week total to mean of 15 4-week totals (from comparable, previous, and subsequent 4-week periods for past 5 years).

**TABLE I. Summary — cases of specified notifiable diseases, United States, cumulative, week ending August 11, 1990 (32nd Week)**

|                               | Cum. 1990 |                                    | Cum. 1990 |
|-------------------------------|-----------|------------------------------------|-----------|
| AIDS                          | 25,517    | Plague                             | 1         |
| Anthrax                       | -         | Polioymyelitis, Paralytic*         | 1         |
| Botulism: Foodborne           | 4         | Psittacosis                        | 76        |
| Infant                        | 38        | Rabies, human                      | 1         |
| Other                         | 5         | Syphilis: civilian                 | 29,299    |
| Brucellosis                   | 43        | military                           | 160       |
| Cholera                       | 2         | Syphilis, congenital, age < 1 year | 45        |
| Congenital rubella syndrome   | 2         | Tetanus                            | 35        |
| Diphtheria                    | 1         | Toxic shock syndrome               | 204       |
| Encephalitis, post-infectious | 62        | Trichinosis                        | 19        |
| Gonorrhea: civilian           | 401,395   | Tuberculosis                       | 13,138    |
| military                      | 5,527     | Tularemia                          | 68        |
| Leprosy                       | 127       | Typhoid fever                      | 243       |
| Leptospirosis                 | 28        | Typhus fever, tickborne (RMSF)     | 336       |
| Measles: imported             | 864       |                                    |           |
| indigenous                    | 16,527    |                                    |           |

\*Three cases of suspected poliomyelitis have been reported in 1990; five of 13 suspected cases in 1989 were confirmed and all were vaccine-associated.

TABLE II. Cases of specified notifiable diseases, United States, weeks ending August 11, 1990, and August 12, 1989 (32nd Week)

| Reporting Area | AIDS      | Aseptic Meningitis | Encephalitis |                 | Gonorrhea (Civilian) |           | Hepatitis (Viral), by type |           |           |             | Legionellosis | Leprosy |
|----------------|-----------|--------------------|--------------|-----------------|----------------------|-----------|----------------------------|-----------|-----------|-------------|---------------|---------|
|                |           |                    | Primary      | Post-infectious | Gonorrhea (Civilian) |           | A                          | B         | NA,NB     | Unspecified |               |         |
|                |           |                    |              |                 | Cum. 1990            | Cum. 1990 |                            |           |           |             |               |         |
| Cum. 1990      | Cum. 1990 | Cum. 1990          | Cum. 1990    | Cum. 1990       | Cum. 1989            | Cum. 1990 | Cum. 1990                  | Cum. 1990 | Cum. 1990 | Cum. 1990   | Cum. 1990     |         |
| UNITED STATES  | 25,517    | 3,961              | 421          | 62              | 401,395              | 417,826   | 17,595                     | 12,273    | 1,312     | 1,039       | 698           | 127     |
| NEW ENGLAND    | 977       | 152                | 15           | -               | 11,250               | 11,831    | 366                        | 653       | 40        | 42          | 32            | 9       |
| Maine          | 40        | 6                  | 1            | -               | 122                  | 164       | 5                          | 25        | 4         | 1           | 3             | -       |
| N.H.           | 44        | 13                 | -            | -               | 119                  | 108       | 6                          | 27        | 3         | 2           | 3             | -       |
| Vt.            | 10        | 16                 | 2            | -               | 34                   | 43        | 4                          | 35        | 3         | -           | 5             | -       |
| Mass.          | 563       | 48                 | 6            | -               | 4,591                | 4,604     | 255                        | 406       | 20        | 37          | 15            | 8       |
| R.I.           | 52        | 46                 | 1            | -               | 690                  | 862       | 38                         | 31        | -         | 2           | 6             | 1       |
| Conn.          | 268       | 23                 | 5            | -               | 5,694                | 6,050     | 58                         | 129       | 10        | -           | -             | -       |
| MID. ATLANTIC  | 7,583     | 388                | 33           | 4               | 55,281               | 62,663    | 2,520                      | 1,717     | 147       | 71          | 217           | 17      |
| Upstate N.Y.   | 944       | 198                | 28           | 1               | 8,170                | 9,570     | 690                        | 439       | 40        | 20          | 86            | 1       |
| N.Y. City      | 4,295     | 76                 | 2            | 1               | 22,930               | 25,023    | 295                        | 470       | 22        | 34          | 42            | 12      |
| N.J.           | 1,541     | -                  | 1            | -               | 9,613                | 9,353     | 250                        | 384       | 31        | -           | 36            | 3       |
| Pa.            | 803       | 114                | 2            | 2               | 14,568               | 18,717    | 1,285                      | 424       | 54        | 17          | 53            | 1       |
| E.N. CENTRAL   | 1,815     | 624                | 98           | 11              | 76,591               | 74,758    | 1,371                      | 1,494     | 100       | 65          | 158           | 2       |
| Ohio           | 440       | 137                | 28           | 3               | 23,282               | 19,842    | 129                        | 266       | 36        | 10          | 52            | -       |
| Ind.           | 153       | 108                | 2            | 6               | 6,793                | 5,370     | 75                         | 284       | 5         | 14          | 30            | -       |
| Ill.           | 742       | 100                | 28           | 2               | 24,764               | 23,812    | 684                        | 279       | 27        | 15          | 8             | 1       |
| Mich.          | 330       | 252                | 37           | -               | 17,118               | 19,360    | 251                        | 429       | 23        | 26          | 49            | 1       |
| Wis.           | 150       | 27                 | 3            | -               | 4,634                | 6,374     | 232                        | 236       | 9         | -           | 19            | -       |
| W.N. CENTRAL   | 593       | 170                | 38           | 1               | 21,127               | 18,381    | 1,027                      | 563       | 89        | 22          | 33            | -       |
| Minn.          | 93        | 12                 | 11           | 1               | 2,604                | 1,982     | 156                        | 76        | 21        | -           | -             | -       |
| Iowa           | 25        | 20                 | 5            | -               | 1,507                | 1,588     | 197                        | 43        | 8         | 2           | 3             | -       |
| Mo.            | 357       | 92                 | 5            | -               | 12,848               | 11,109    | 320                        | 338       | 36        | 16          | 19            | -       |
| N. Dak.        | 2         | 8                  | -            | -               | 55                   | 87        | 10                         | 4         | 2         | 1           | -             | -       |
| S. Dak.        | 2         | 5                  | 2            | -               | 134                  | 156       | 131                        | 5         | 3         | -           | -             | -       |
| Nebr.          | 29        | 13                 | 7            | -               | 976                  | 873       | 57                         | 23        | 4         | -           | 6             | -       |
| Kans.          | 85        | 20                 | 8            | -               | 3,003                | 2,586     | 156                        | 74        | 15        | 3           | 5             | -       |
| S. ATLANTIC    | 5,359     | 872                | 96           | 18              | 115,384              | 113,007   | 2,128                      | 2,364     | 201       | 162         | 110           | 4       |
| Del.           | 58        | 25                 | 3            | -               | 1,870                | 1,855     | 85                         | 61        | 6         | 1           | 5             | -       |
| Md.            | 558       | 103                | 13           | 1               | 13,053               | 12,649    | 760                        | 346       | 26        | 8           | 44            | 2       |
| D.C.           | 446       | 2                  | -            | -               | 8,034                | 7,437     | 12                         | 28        | 4         | -           | -             | -       |
| Va.            | 497       | 130                | 35           | 2               | 10,082               | 9,533     | 179                        | 145       | 29        | 119         | 8             | -       |
| W. Va.         | 38        | 28                 | 12           | -               | 725                  | 871       | 12                         | 54        | 4         | 3           | 3             | -       |
| N.C.           | 372       | 81                 | 23           | -               | 18,057               | 16,703    | 472                        | 660       | 79        | -           | 15            | 1       |
| S.C.           | 233       | 12                 | 1            | -               | 9,148                | 10,338    | 28                         | 380       | 12        | 8           | 15            | -       |
| Ga.            | 771       | 170                | 4            | 1               | 25,587               | 21,802    | 221                        | 269       | 7         | 7           | 12            | -       |
| Fla.           | 2,386     | 321                | 5            | 14              | 28,828               | 31,819    | 359                        | 421       | 34        | 16          | 8             | 1       |
| E.S. CENTRAL   | 644       | 380                | 33           | 1               | 33,970               | 32,968    | 242                        | 928       | 94        | 5           | 45            | -       |
| Ky.            | 111       | 88                 | 10           | -               | 3,688                | 3,193     | 61                         | 322       | 30        | 4           | 18            | -       |
| Tenn.          | 193       | 59                 | 17           | 1               | 10,086               | 10,888    | 113                        | 499       | 48        | -           | 15            | -       |
| Ala.           | 144       | 161                | 6            | -               | 11,801               | 10,582    | 67                         | 103       | 14        | -           | 12            | -       |
| Miss.          | 196       | 72                 | -            | -               | 8,395                | 8,305     | 1                          | 4         | 2         | 1           | -             | -       |
| W.S. CENTRAL   | 2,910     | 414                | 18           | 6               | 40,121               | 43,373    | 1,781                      | 1,209     | 58        | 172         | 34            | 28      |
| Ark.           | 104       | 7                  | 1            | -               | 5,284                | 4,973     | 298                        | 51        | 6         | 12          | 7             | -       |
| La.            | 433       | 56                 | 4            | -               | 8,071                | 9,111     | 117                        | 188       | 2         | 6           | 11            | -       |
| Okla.          | 147       | 36                 | 2            | 5               | 3,673                | 3,750     | 354                        | 91        | 19        | 16          | 12            | -       |
| Tex.           | 2,226     | 315                | 11           | 1               | 23,093               | 25,539    | 1,012                      | 879       | 31        | 138         | 4             | 28      |
| MOUNTAIN       | 676       | 188                | 16           | -               | 7,813                | 8,917     | 2,868                      | 932       | 125       | 79          | 28            | -       |
| Mont.          | 9         | 3                  | -            | -               | 110                  | 120       | 79                         | 45        | 4         | 4           | 2             | -       |
| Idaho          | 17        | -                  | -            | -               | 82                   | 120       | 54                         | 57        | 8         | -           | 3             | -       |
| Wyo.           | 2         | 1                  | 1            | -               | 96                   | 57        | 43                         | 11        | 5         | 1           | -             | -       |
| Colo.          | 218       | 43                 | 3            | -               | 1,562                | 1,927     | 179                        | 101       | 28        | 28          | 4             | -       |
| N. Mex.        | 54        | 9                  | -            | -               | 771                  | 859       | 566                        | 118       | 8         | 2           | 2             | -       |
| Ariz.          | 213       | 95                 | 6            | -               | 3,324                | 3,384     | 1,453                      | 325       | 46        | 30          | 9             | -       |
| Utah           | 61        | 21                 | 2            | -               | 248                  | 272       | 272                        | 65        | 16        | 5           | 3             | -       |
| Nev.           | 102       | 16                 | 4            | -               | 1,620                | 2,178     | 222                        | 210       | 10        | 9           | 5             | -       |
| PACIFIC        | 4,960     | 773                | 74           | 21              | 39,858               | 51,928    | 5,292                      | 2,413     | 458       | 421         | 41            | 67      |
| Wash.          | 381       | -                  | 5            | 1               | 3,315                | 4,023     | 896                        | 375       | 80        | 18          | 10            | 4       |
| Oreg.          | 184       | -                  | -            | -               | 1,616                | 1,860     | 538                        | 267       | 34        | 7           | -             | -       |
| Calif.         | 4,290     | 654                | 64           | 19              | 33,983               | 45,182    | 3,672                      | 1,691     | 332       | 390         | 30            | 53      |
| Alaska         | 22        | 61                 | 4            | -               | 630                  | 566       | 126                        | 39        | 3         | 1           | -             | -       |
| Hawaii         | 83        | 58                 | 1            | 1               | 314                  | 297       | 60                         | 41        | 9         | 5           | 1             | 10      |
| Guam           | 1         | 2                  | -            | -               | 136                  | 97        | 8                          | 1         | -         | 7           | -             | -       |
| P.R.           | 902       | 43                 | 6            | -               | 460                  | 672       | 107                        | 176       | 2         | 19          | -             | -       |
| V.I.           | 9         | -                  | -            | -               | 249                  | 419       | 1                          | 8         | -         | -           | -             | -       |
| Amer. Samoa    | -         | 1                  | -            | -               | 44                   | 30        | 19                         | -         | -         | -           | -             | 10      |
| C.N.M.I.       | -         | -                  | -            | -               | 106                  | 63        | 9                          | 6         | -         | 15          | -             | 3       |

N: Not notifiable

U: Unavailable

C.N.M.I.: Commonwealth of the Northern Mariana Islands

**TABLE II. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending August 11, 1990, and August 12, 1989 (32nd Week)**

| Reporting Area | Malaria | Measles (Rubeola) |           |                 |           |           | Meningococcal Infections | Mumps |           | Pertussis |           |           | Rubella |           |           |
|----------------|---------|-------------------|-----------|-----------------|-----------|-----------|--------------------------|-------|-----------|-----------|-----------|-----------|---------|-----------|-----------|
|                |         | Indigenous        |           | Imported*       |           | Total     |                          | 1990  | Cum. 1990 | 1990      | Cum. 1990 | Cum. 1989 | 1990    | Cum. 1990 | Cum. 1989 |
|                |         | 1990              | Cum. 1990 | 1990            | Cum. 1990 | Cum. 1989 |                          |       |           |           |           |           |         |           |           |
| UNITED STATES  | 689     | 39                | 16,527    | 38              | 864       | 10,616    | 1,639                    | 68    | 3,670     | 95        | 1,965     | 1,835     | 9       | 691       | 282       |
| NEW ENGLAND    | 56      | -                 | 236       | 3               | 24        | 303       | 123                      | -     | 36        | 14        | 247       | 243       | -       | 7         | 6         |
| Maine          | 1       | -                 | 27        | -               | 2         | -         | 10                       | -     | 4         | 10        | 6         | -         | -       | -         | -         |
| N.H.           | 4       | -                 | -         | -               | 8         | -         | 5                        | -     | 8         | 9         | 31        | 5         | -       | 1         | 4         |
| Vt.            | 5       | -                 | -         | -               | 1         | 3         | 10                       | -     | 1         | -         | 6         | 6         | -       | -         | 1         |
| Mass.          | 30      | -                 | 17        | 31 <sup>§</sup> | 7         | 41        | 57                       | -     | 11        | -         | 184       | 204       | -       | 2         | 1         |
| R.I.           | 4       | -                 | 27        | -               | 3         | 41        | 12                       | -     | 5         | -         | 2         | 11        | -       | 1         | -         |
| Conn.          | 12      | -                 | 165       | -               | 3         | 210       | 29                       | -     | 11        | 1         | 14        | 11        | -       | 3         | -         |
| MID. ATLANTIC  | 155     | 10                | 945       | -               | 149       | 879       | 240                      | 3     | 235       | 7         | 338       | 99        | -       | 5         | 28        |
| Upstate N.Y.   | 31      | -                 | 199       | -               | 109       | 137       | 87                       | 1     | 103       | 6         | 265       | 42        | -       | 4         | 11        |
| N.Y. City      | 51      | 10                | 211       | -               | 21        | 83        | 33                       | -     | -         | -         | -         | 3         | -       | -         | 15        |
| N.J.           | 53      | -                 | 173       | -               | 10        | 418       | 56                       | -     | 54        | -         | 13        | 23        | -       | -         | 2         |
| Pa.            | 20      | -                 | 362       | -               | 9         | 241       | 64                       | 2     | 78        | 1         | 60        | 31        | -       | 1         | -         |
| E.N. CENTRAL   | 32      | 6                 | 3,076     | -               | 143       | 3,283     | 218                      | 16    | 379       | 19        | 423       | 259       | -       | 30        | 24        |
| Ohio           | 5       | -                 | 449       | -               | 3         | 661       | 71                       | 14    | 89        | 8         | 126       | 33        | -       | 1         | 3         |
| Ind.           | 2       | 1                 | 317       | -               | 1         | 51        | 23                       | 2     | 15        | 1         | 75        | 17        | -       | -         | -         |
| Ill.           | 12      | -                 | 1,219     | -               | 10        | 2,079     | 53                       | -     | 114       | -         | 97        | 91        | -       | 17        | 19        |
| Mich.          | 10      | 5                 | 348       | -               | 125       | 299       | 50                       | -     | 123       | 10        | 54        | 26        | -       | 9         | 1         |
| Wis.           | 3       | -                 | 743       | -               | 4         | 193       | 21                       | -     | 38        | -         | 71        | 92        | -       | 3         | 1         |
| W.N. CENTRAL   | 10      | -                 | 750       | -               | 13        | 631       | 57                       | 2     | 105       | 4         | 87        | 117       | -       | 14        | 6         |
| Minn.          | 1       | -                 | 314       | -               | 3         | 15        | 11                       | -     | 7         | -         | 17        | 23        | -       | 9         | -         |
| Iowa           | 2       | -                 | 23        | -               | 1         | 7         | 1                        | -     | -         | -         | -         | -         | -       | -         | -         |
| Mo.            | 6       | -                 | 78        | -               | -         | 363       | 22                       | -     | 16        | 3         | 11        | 13        | -       | 4         | 1         |
| N. Dak.        | -       | -                 | -         | -               | -         | -         | 1                        | -     | 46        | -         | 48        | 72        | -       | -         | 4         |
| S. Dak.        | -       | -                 | 15        | -               | 8         | -         | 2                        | -     | -         | -         | 1         | 1         | -       | 1         | -         |
| Nebr.          | -       | -                 | 97        | -               | 1         | 113       | 5                        | -     | 3         | -         | 2         | 4         | -       | -         | -         |
| Kans.          | 1       | -                 | 223       | -               | -         | 133       | 15                       | 2     | 33        | 1         | 7         | 3         | -       | -         | 1         |
| S. ATLANTIC    | 145     | 4                 | 823       | 35              | 207       | 516       | 296                      | 28    | 1,521     | 9         | 168       | 153       | -       | 15        | 8         |
| Del.           | 2       | U                 | 8         | U               | 3         | 39        | 2                        | U     | 3         | U         | 3         | 1         | U       | -         | -         |
| Md.            | 41      | 1                 | 190       | -               | 18        | 60        | 33                       | 11    | 877       | 4         | 42        | 16        | -       | 2         | 2         |
| D.C.           | 10      | -                 | 15        | -               | 7         | 31        | 11                       | 2     | 31        | -         | 14        | -         | -       | 1         | -         |
| Va.            | 36      | 2                 | 70        | -               | 2         | 21        | 38                       | 2     | 87        | -         | 14        | 9         | -       | 1         | -         |
| W. Va.         | 2       | -                 | 6         | -               | -         | 51        | 12                       | -     | 40        | 2         | 14        | 20        | -       | -         | -         |
| N.C.           | 10      | -                 | 9         | -               | 15        | 168       | 42                       | -     | 220       | -         | 39        | 33        | -       | -         | 1         |
| S.C.           | -       | -                 | 4         | -               | -         | 2         | 21                       | 6     | 33        | -         | 5         | -         | -       | -         | -         |
| Ga.            | 13      | -                 | 80        | 34 <sup>§</sup> | 103       | 2         | 54                       | 7     | 78        | 3         | 24        | 21        | -       | -         | -         |
| Fla.           | 31      | 1                 | 441       | 15              | 59        | 142       | 83                       | -     | 152       | -         | 13        | 53        | -       | 11        | 5         |
| E.S. CENTRAL   | 15      | 3                 | 146       | -               | 2         | 200       | 96                       | 2     | 80        | 3         | 106       | 88        | 1       | 2         | 2         |
| Ky.            | 2       | 2                 | 31        | -               | -         | 23        | 31                       | -     | -         | -         | -         | 1         | -       | -         | -         |
| Tenn.          | 8       | 1                 | 70        | -               | -         | 132       | 35                       | 1     | 44        | 2         | 45        | 33        | 1       | 2         | 2         |
| Ala.           | 5       | -                 | 19        | -               | 2         | 45        | 28                       | 1     | 12        | 1         | 56        | 45        | -       | -         | -         |
| Miss.          | -       | -                 | 26        | -               | -         | -         | 2                        | -     | 24        | -         | 5         | 9         | -       | -         | -         |
| W.S. CENTRAL   | 30      | 1                 | 3,889     | -               | 86        | 3,108     | 111                      | 6     | 577       | 2         | 49        | 134       | -       | 4         | 36        |
| Ark.           | 2       | -                 | 12        | -               | 28        | 5         | 16                       | 2     | 130       | -         | 2         | 17        | -       | 3         | -         |
| La.            | 1       | -                 | 10        | -               | -         | 9         | 26                       | 3     | 97        | 1         | 17        | 11        | -       | -         | 5         |
| Okla.          | 8       | -                 | 174       | -               | -         | 105       | 15                       | 1     | 104       | 1         | 30        | 25        | -       | 1         | 1         |
| Tex.           | 19      | 1                 | 3,693     | -               | 58        | 2,989     | 54                       | -     | 246       | -         | -         | 81        | -       | -         | 30        |
| MOUNTAIN       | 16      | 12                | 735       | -               | 89        | 356       | 52                       | 3     | 291       | 10        | 184       | 464       | 2       | 103       | 35        |
| Mont.          | 1       | -                 | -         | -               | 1         | 13        | 10                       | -     | 1         | -         | 26        | 26        | -       | 13        | 1         |
| Idaho          | 3       | -                 | 15        | -               | 10        | 2         | 5                        | -     | 141       | -         | 35        | 64        | -       | 49        | 32        |
| Wyo.           | -       | -                 | -         | -               | 11        | -         | -                        | -     | 2         | -         | -         | -         | -       | -         | 1         |
| Colo.          | 2       | -                 | 90        | -               | 42        | 71        | 16                       | -     | 21        | 3         | 61        | 38        | -       | 4         | -         |
| N. Mex.        | 1       | -                 | 80        | -               | 10        | 31        | 6                        | N     | N         | 1         | 14        | 17        | -       | -         | -         |
| Ariz.          | 8       | 7                 | 274       | -               | 12        | 124       | 4                        | 3     | 103       | 6         | 34        | 305       | -       | 30        | -         |
| Utah           | -       | -                 | 71        | -               | -         | 113       | 5                        | -     | 8         | -         | 10        | 13        | -       | 1         | -         |
| Nev.           | 1       | 5                 | 205       | -               | 3         | 2         | 6                        | -     | 15        | -         | 4         | 1         | 2       | 6         | 1         |
| PACIFIC        | 230     | 3                 | 5,927     | -               | 151       | 1,340     | 446                      | 8     | 446       | 27        | 363       | 278       | 6       | 511       | 137       |
| Wash.          | 17      | -                 | 202       | -               | 69        | 44        | 56                       | 1     | 40        | 6         | 87        | 109       | -       | -         | -         |
| Oreg.          | 12      | 3                 | 165       | -               | 44        | 19        | 50                       | N     | N         | 6         | 35        | 7         | 1       | 10        | 2         |
| Calif.         | 196     | -                 | 5,474     | -               | 32        | 1,250     | 328                      | 7     | 391       | 13        | 207       | 157       | 5       | 491       | 114       |
| Alaska         | 2       | -                 | 78        | -               | 2         | 1         | 8                        | -     | 3         | -         | 4         | -         | -       | -         | -         |
| Hawaii         | 3       | -                 | 8         | -               | 4         | 29        | 4                        | -     | 12        | 2         | 30        | 5         | -       | 10        | 21        |
| Guam           | 3       | U                 | -         | U               | 1         | 2         | -                        | U     | 3         | U         | -         | 1         | U       | -         | -         |
| P.R.           | 2       | U                 | 808       | U               | -         | 459       | 9                        | U     | 7         | U         | 5         | 4         | U       | -         | 6         |
| V.I.           | -       | U                 | 21        | U               | 3         | 4         | -                        | U     | 7         | U         | -         | -         | U       | -         | -         |
| Amer. Samoa    | 35      | U                 | 132       | U               | -         | -         | -                        | U     | 15        | U         | -         | -         | U       | -         | -         |
| C.N.M.I.       | -       | U                 | -         | U               | -         | -         | -                        | U     | 7         | U         | -         | -         | U       | -         | -         |

\*For measles only, imported cases includes both out-of-state and international importations.

N: Not notifiable U: Unavailable <sup>1</sup>International <sup>2</sup>Out-of-state

**TABLE II. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending August 11, 1990, and August 12, 1989 (32nd Week)**

| Reporting Area | Syphilis (Civilian)<br>(Primary & Secondary) |              | Toxic-<br>shock<br>Syndrome | Tuberculosis |              | Tula-<br>remia | Typhoid<br>Fever | Typhus Fever<br>(Tick-borne)<br>(RMSF) | Rabies, Animal |
|----------------|--|--------------|-----------------------------|--------------|--------------|----------------|------------------|--|----------------|
|                | Cum.<br>1990                                 | Cum.<br>1989 | Cum.<br>1990                | Cum.<br>1990 | Cum.<br>1989 | Cum.<br>1990   | Cum.<br>1990     | Cum.<br>1990                           | Cum.<br>1990   |
| UNITED STATES  | 29,299                                       | 26,277       | 204                         | 13,138       | 12,693       | 68             | 243              | 336                                    | 2,566          |
| NEW ENGLAND    | 1,097  | 1,028        | 15                          | 386          | 341          | 2              | 18               | 13                                     | 4              |
| Maine          | 5  | 5            | 4                           | -            | 12           | -              | -                | -                                      | -              |
| N.H.           | 40   | 9            | 1                           | 3            | 16           | -              | -                | -                                      | 2              |
| Vt.            | 1  | -            | -                           | 7            | 5            | -              | -                | -                                      | -              |
| Mass.          | 427  | 315          | 8                           | 166          | 178          | 2              | 17               | 12                                     | -              |
| R.I.           | 9  | 17           | 1                           | 119          | 37           | -              | -                | -                                      | -              |
| Conn.          | 615  | 682          | 1                           | 91           | 93           | -              | 1                | 1                                      | 2              |
| MID. ATLANTIC  | 6,104  | 5,394        | 21                          | 3,323        | 2,425        | 1              | 63               | 16                                     | 573            |
| Upstate N.Y.   | 526  | 567          | 7                           | 260          | 200          | -              | 13               | 8                                      | 70             |
| N.Y. City      | 2,776  | 2,370        | 5                           | 2,073        | 1,346        | -              | 35               | -                                      | -              |
| N.J.           | 1,013  | 834          | -                           | 546          | 436          | 1              | 13               | 5                                      | 183            |
| Pa.            | 1,789  | 1,623        | 9                           | 444          | 443          | -              | 2                | 3                                      | 320            |
| E.N. CENTRAL   | 2,046  | 1,078        | 49                          | 1,338        | 1,324        | 1              | 21               | 30                                     | 98             |
| Ohio           | 333  | 81           | 19                          | 219          | 242          | 1              | 4                | 25                                     | 5              |
| Ind.           | 51   | 42           | 1                           | 105          | 124          | -              | 1                | -                                      | 4              |
| Ill.           | 843  | 482          | 7                           | 678          | 607          | -              | 11               | -                                      | 19             |
| Mich.          | 618  | 380          | 22                          | 276          | 270          | -              | 4                | 5                                      | 26             |
| Wis.           | 201  | 93           | -                           | 60           | 81           | -              | 1                | -                                      | 44             |
| W.N. CENTRAL   | 279  | 199          | 20                          | 347          | 328          | 24             | 1                | 37                                     | 430            |
| Minn.          | 53   | 29           | 1                           | 61           | 66           | -              | -                | -                                      | 159            |
| Iowa           | 39   | 21           | 4                           | 35           | 28           | -              | -                | -                                      | 17             |
| Mo.            | 152  | 101          | 8                           | 170          | 152          | 18             | 1                | 26                                     | 17             |
| N. Dak.        | 1  | 3            | -                           | 13           | 11           | -              | -                | -                                      | 59             |
| S. Dak.        | 1  | -            | -                           | 9            | 17           | 3              | -                | 2                                      | 139            |
| Nebr.          | 8  | 17           | 3                           | 14           | 14           | 1              | -                | -                                      | 4              |
| Kans.          | 25   | 28           | 4                           | 45           | 40           | 2              | -                | 9                                      | 35             |
| S. ATLANTIC    | 9,509  | 9,701        | 20                          | 2,619        | 2,672        | 3              | 28               | 135                                    | 728            |
| Del.           | 107  | 99           | 1                           | 23           | 25           | -              | -                | 1                                      | 13             |
| Md.            | 727  | 468          | 1                           | 206          | 220          | -              | 7                | 11                                     | 268            |
| D.C.           | 639  | 574          | 1                           | 91           | 125          | -              | -                | -                                      | -              |
| Va.            | 515  | 340          | 2                           | 231          | 214          | 1              | 2                | 14                                     | 126            |
| W. Va.         | 33   | 10           | -                           | 47           | 47           | -              | -                | -                                      | 26             |
| N.C.           | 1,100  | 608          | 10                          | 348          | 306          | 1              | 2                | 72                                     | 4              |
| S.C.           | 600  | 505          | 2                           | 293          | 311          | 1              | 1                | 31                                     | 86             |
| Ga.            | 2,419  | 2,492        | 1                           | 424          | 400          | -              | 1                | 6                                      | 142            |
| Fla.           | 3,369  | 4,605        | 2                           | 956          | 1,024        | -              | 15               | -                                      | 63             |
| E.S. CENTRAL   | 2,618  | 1,671        | 9                           | 1,028        | 1,024        | 5              | 2                | 46                                     | 116            |
| Ky.            | 48   | 36           | 2                           | 252          | 251          | 1              | 1                | 5                                      | 31             |
| Tenn.          | 1,084  | 724          | 6                           | 277          | 281          | 4              | -                | 34                                     | 27             |
| Ala.           | 785  | 517          | 1                           | 316          | 292          | -              | 1                | 7                                      | 58             |
| Miss.          | 701  | 394          | -                           | 183          | 200          | -              | -                | -                                      | -              |
| W.S. CENTRAL   | 4,490  | 3,453        | 11                          | 1,647        | 1,496        | 21             | 8                | 49                                     | 303            |
| Ark.           | 309  | 208          | -                           | 213          | 157          | 14             | -                | 10                                     | 35             |
| La.            | 1,150  | 803          | 1                           | 150          | 201          | -              | -                | 1                                      | 8              |
| Okla.          | 144  | 58           | 7                           | 119          | 131          | 7              | 2                | 35                                     | 89             |
| Tex.           | 2,887  | 2,384        | 3                           | 1,165        | 1,007        | -              | 6                | 3                                      | 171            |
| MOUNTAIN       | 548  | 467          | 24                          | 309          | 293          | 10             | 18               | 7                                      | 127            |
| Mont.          | -  | 1            | -                           | 10           | 11           | -              | -                | 4                                      | 34             |
| Idaho          | 6  | 1            | 2                           | 9            | 19           | -              | -                | -                                      | 1              |
| Wyo.           | -  | 3            | 2                           | 3            | -            | 3              | -                | -                                      | 42             |
| Colo.          | 25   | 53           | 7                           | 14           | 20           | 2              | -                | -                                      | 6              |
| N. Mex.        | 29   | 20           | 3                           | 74           | 53           | 3              | -                | 1                                      | 6              |
| Ariz.          | 398  | 145          | 7                           | 142          | 138          | -              | 16               | 1                                      | 25             |
| Utah           | 6  | 12           | 3                           | 18           | 24           | 2              | -                | 1                                      | 5              |
| Nev.           | 84   | 232          | -                           | 39           | 28           | -              | 2                | -                                      | 8              |
| PACIFIC        | 2,608  | 3,286        | 35                          | 2,141        | 2,790        | 1              | 84               | 3                                      | 187            |
| Wash.          | 229  | 272          | 4                           | 172          | 150          | 1              | 2                | -                                      | -              |
| Oreg.          | 91   | 152          | -                           | 76           | 93           | -              | 4                | 1                                      | 1              |
| Calif.         | 2,270  | 2,850        | 30                          | 1,749        | 2,397        | -              | 74               | 2                                      | 164            |
| Alaska         | 10   | 3            | -                           | 26           | 42           | -              | -                | -                                      | 22             |
| Hawaii         | 8  | 9            | 1                           | 118          | 108          | -              | 4                | -                                      | -              |
| Guam           | 2  | 4            | -                           | 23           | 54           | -              | -                | -                                      | -              |
| P.R.           | 204  | 349          | -                           | 66           | 200          | -              | -                | -                                      | 30             |
| V.I.           | 3  | 7            | -                           | 4            | 4            | -              | -                | -                                      | -              |
| Amer. Samoa    | -  | -            | -                           | 8            | 2            | -              | 1                | -                                      | -              |
| C.N.M.I.       | 1  | 7            | -                           | 29           | 15           | -              | 4                | -                                      | -              |

U: Unavailable

**TABLE III. Deaths in 121 U.S. cities,\* week ending August 11, 1990 (32nd Week)**

| Reporting Area      | All Causes, By Age (Years) |       |       |       |      |    | P&I** | Reporting Area        | All Causes, By Age (Years) |          |       |       |       |      | P&I** |
|---------------------|----------------------------|-------|-------|-------|------|----|-------|-----------------------|----------------------------|----------|-------|-------|-------|------|-------|
|                     | All Ages                   | ≥65   | 45-64 | 25-44 | 1-24 | <1 |       |                       | Total                      | All Ages | ≥65   | 45-64 | 25-44 | 1-24 |       |
| NEW ENGLAND         | 527                        | 359   | 97    | 42    | 14   | 15 | 45    | S. ATLANTIC           | 1,220                      | 733      | 230   | 151   | 69    | 37   | 62    |
| Boston, Mass.       | 161                        | 94    | 36    | 16    | 6    | 9  | 18    | Atlanta, Ga.          | 171                        | 94       | 37    | 27    | 11    | 2    | 6     |
| Bridgeport, Conn.   | 33                         | 23    | 5     | 3     | 2    | -  | 3     | Baltimore, Md.        | 213                        | 137      | 36    | 23    | 12    | 5    | 17    |
| Cambridge, Mass.    | 24                         | 16    | 6     | 2     | -    | -  | 3     | Charlotte, N.C.       | 73                         | 48       | 11    | 7     | 3     | 4    | 9     |
| Fall River, Mass.   | 23                         | 16    | 5     | 2     | -    | -  | 1     | Jacksonville, Fla.    | 109                        | 75       | 17    | 8     | 4     | 5    | 6     |
| Hartford, Conn.     | 50                         | 33    | 10    | 4     | 1    | 2  | 6     | Miami, Fla.           | 112                        | 61       | 18    | 21    | 11    | 1    | -     |
| Lowell, Mass.       | 27                         | 23    | 2     | 1     | 1    | -  | 1     | Norfolk, Va.          | 80                         | 49       | 11    | 11    | 7     | 2    | 5     |
| Lynn, Mass.         | 19                         | 16    | -     | 2     | 1    | -  | 1     | Richmond, Va.         | 63                         | 37       | 17    | 5     | 1     | 3    | 4     |
| New Bedford, Mass.  | 15                         | 8     | 7     | -     | -    | -  | -     | Savannah, Ga.         | 48                         | 31       | 9     | 2     | 2     | 4    | 2     |
| New Haven, Conn.    | 24                         | 17    | 3     | 2     | 1    | 1  | 2     | St. Petersburg, Fla.  | 48                         | 41       | 3     | 3     | -     | 1    | 2     |
| Providence, R.I.    | 46                         | 30    | 10    | 3     | 1    | 2  | 2     | Tampa, Fla.           | 56                         | 28       | 9     | 11    | 5     | 3    | 6     |
| Somerville, Mass.   | 4                          | 2     | 1     | 1     | -    | -  | -     | Washington, D.C.      | 212                        | 105      | 57    | 31    | 13    | 6    | 5     |
| Springfield, Mass.  | 43                         | 32    | 7     | 3     | -    | 1  | 6     | Wilmington, Del.      | 35                         | 27       | 5     | 2     | -     | 1    | -     |
| Waterbury, Conn.    | 20                         | 14    | 4     | 2     | -    | -  | -     | E.S. CENTRAL          | 760                        | 470      | 153   | 72    | 35    | 30   | 52    |
| Worcester, Mass.    | 38                         | 35    | 1     | 1     | 1    | -  | 2     | Birmingham, Ala.      | 109                        | 67       | 23    | 10    | 6     | 3    | 2     |
| MID. ATLANTIC       | 2,624                      | 1,687 | 491   | 311   | 64   | 71 | 116   | Chattanooga, Tenn.    | 63                         | 47       | 12    | 2     | 1     | 1    | 7     |
| Albany, N.Y.        | 48                         | 32    | 9     | 2     | 1    | 4  | 3     | Knoxville, Tenn.      | 82                         | 51       | 21    | 7     | 2     | 1    | 7     |
| Allentown, Pa.      | 22                         | 16    | 4     | 1     | 1    | -  | -     | Louisville, Ky.       | 71                         | 50       | 13    | 4     | 3     | 1    | 6     |
| Buffalo, N.Y.       | 100                        | 70    | 20    | 6     | 1    | 3  | 4     | Memphis, Tenn.        | 196                        | 113      | 33    | 20    | 11    | 19   | 17    |
| Camden, N.J.        | 35                         | 21    | 7     | 3     | 2    | 2  | -     | Mobile, Ala.          | 62                         | 38       | 12    | 7     | 4     | 1    | 5     |
| Elizabeth, N.J.     | 29                         | 21    | 7     | -     | 1    | -  | 2     | Montgomery, Ala.‡     | 40                         | 29       | 6     | 3     | 1     | 1    | 1     |
| Erie, Pa.†          | 35                         | 27    | 6     | -     | 1    | 1  | 4     | Nashville, Tenn.      | 137                        | 75       | 33    | 19    | 7     | 3    | 7     |
| Jersey City, N.J.   | 42                         | 24    | 9     | 7     | 1    | 1  | 1     | W.S. CENTRAL          | 1,686                      | 1,018    | 356   | 195   | 62    | 55   | 68    |
| N.Y. City, N.Y.     | 1,272                      | 796   | 222   | 194   | 35   | 25 | 39    | Austin, Tex.          | 52                         | 35       | 8     | 5     | 2     | 2    | 7     |
| Newark, N.J.        | 45                         | 24    | 6     | 10    | 1    | 4  | 4     | Baton Rouge, La.      | 47                         | 29       | 6     | 6     | 2     | 4    | -     |
| Paterson, N.J.      | 21                         | 12    | 3     | 4     | 1    | 1  | -     | Corpus Christi, Tex.  | 48                         | 34       | 10    | 3     | -     | 1    | 4     |
| Philadelphia, Pa.   | 595                        | 367   | 131   | 62    | 11   | 24 | 29    | Dallas, Tex.          | 208                        | 123      | 35    | 30    | 12    | 8    | 7     |
| Pittsburgh, Pa.†    | 51                         | 37    | 6     | 4     | 2    | 2  | 4     | El Paso, Tex.         | 62                         | 39       | 9     | 8     | 2     | 4    | -     |
| Reading, Pa.        | 30                         | 21    | 7     | 2     | -    | -  | 3     | Fort Worth, Tex       | 106                        | 49       | 25    | 16    | 9     | 7    | 2     |
| Rochester, N.Y.     | 103                        | 75    | 17    | 3     | 4    | 4  | 14    | Houston, Tex.‡        | 734                        | 436      | 169   | 89    | 24    | 16   | 18    |
| Schenectady, N.Y.‡  | 21                         | 17    | 3     | 1     | -    | -  | 3     | Little Rock, Ark.     | 63                         | 39       | 13    | 5     | 3     | 3    | 10    |
| Scranton, Pa.†      | 17                         | 14    | 3     | 1     | -    | -  | -     | New Orleans, La.      | 66                         | 34       | 16    | 12    | 6     | 4    | -     |
| Syracuse, N.Y.      | 76                         | 52    | 19    | 4     | 1    | -  | -     | San Antonio, Tex.     | 169                        | 109      | 36    | 16    | 6     | 2    | 11    |
| Trout, N.J.‡        | 34                         | 24    | 7     | 3     | -    | -  | 1     | Shreveport, La.       | 43                         | 33       | 8     | 1     | -     | 1    | -     |
| Utica, N.Y.         | 16                         | 14    | 1     | 3     | 1    | -  | -     | Tulsa, Okla.          | 88                         | 58       | 21    | 4     | 2     | 3    | 9     |
| Yonkers, N.Y.       | 32                         | 23    | 6     | 3     | -    | -  | 5     | MOUNTAIN              | 616                        | 378      | 116   | 57    | 45    | 20   | 27    |
| E.N. CENTRAL        | 2,193                      | 1,442 | 450   | 158   | 65   | 77 | 77    | Albuquerque, N. Mex.  | 65                         | 42       | 7     | 14    | 1     | 1    | 3     |
| Akron, Ohio         | 61                         | 42    | 17    | -     | 1    | 1  | 5     | Colo. Springs, Colo.  | 47                         | 29       | 8     | 4     | 4     | 2    | 5     |
| Canton, Ohio        | 37                         | 30    | 3     | 2     | 2    | -  | 4     | Denver, Colo.         | 76                         | 48       | 17    | 9     | 1     | 1    | -     |
| Chicago, Ill.‡      | 564                        | 362   | 125   | 45    | 10   | 22 | 16    | Las Vegas, Nev.       | 113                        | 65       | 24    | 13    | 8     | 3    | 7     |
| Cincinnati, Ohio    | 155                        | 103   | 39    | 6     | 3    | 4  | 12    | Ogden, Utah           | 21                         | 15       | 2     | -     | 3     | 1    | 3     |
| Cleveland, Ohio     | 136                        | 75    | 39    | 10    | 3    | 9  | 8     | Phoenix, Ariz.        | 122                        | 71       | 28    | 13    | 6     | 4    | 1     |
| Columbus, Ohio      | 156                        | 103   | 35    | 11    | 3    | 4  | 3     | Pueblo, Colo.         | 29                         | 20       | 5     | 1     | 1     | 2    | 1     |
| Dayton, Ohio        | 77                         | 49    | 15    | 5     | 5    | 3  | 2     | Salt Lake City, Utah  | 42                         | 20       | 9     | 3     | 7     | 3    | -     |
| Detroit, Mich.      | 218                        | 120   | 57    | 24    | 9    | 7  | 1     | Tucson, Ariz.         | 101                        | 68       | 16    | -     | 14    | 3    | 7     |
| Evansville, Ind.    | 35                         | 29    | 3     | 1     | 1    | 1  | 3     | PACIFIC               | 1,823                      | 1,203    | 302   | 196   | 75    | 41   | 114   |
| Fort Wayne, Ind.    | 52                         | 32    | 11    | 4     | 1    | 1  | 1     | Berkeley, Calif.      | 13                         | 12       | -     | -     | 1     | -    | 1     |
| Gay, Ind.           | 17                         | 7     | 5     | 2     | 3    | -  | 2     | Fresno, Calif.        | 101                        | 66       | 18    | 9     | 3     | 5    | 9     |
| Grand Rapids, Mich. | 53                         | 43    | 6     | 2     | 1    | 1  | 4     | Glendale, Calif.      | 31                         | 21       | 8     | 2     | -     | -    | 2     |
| Indianapolis, Ind.  | 166                        | 116   | 23    | 13    | 7    | 7  | 1     | Honolulu, Hawaii      | 80                         | 54       | 17    | 5     | 3     | 1    | 11    |
| Madison, Wis.       | 41                         | 27    | 5     | 3     | 4    | 2  | 2     | Long Beach, Calif.    | 85                         | 47       | 21    | 10    | 4     | 3    | 10    |
| Milwaukee, Wis.     | 122                        | 89    | 17    | 9     | 4    | 3  | 2     | Los Angeles, Calif.   | 523                        | 345      | 79    | 67    | 22    | 8    | 20    |
| Peoria, Ill.        | 48                         | 30    | 6     | 8     | 2    | 2  | 2     | Oakland, Calif.       | 57                         | 38       | 6     | 7     | 3     | 3    | 1     |
| Rockford, Ill.      | 47                         | 32    | 9     | 3     | 1    | 2  | 1     | Pasadena, Calif.      | 26                         | 16       | 2     | 2     | 1     | 5    | 2     |
| South Bend, Ind.    | 58                         | 41    | 14    | -     | 1    | 2  | 3     | Portland, Oreg.       | 111                        | 89       | 11    | 5     | 2     | 4    | 6     |
| Toledo, Ohio        | 83                         | 59    | 14    | 6     | 1    | 3  | 3     | Sacramento, Calif.    | 150                        | 99       | 30    | 12    | 8     | -    | 13    |
| Youngstown, Ohio    | 67                         | 53    | 7     | 4     | -    | 3  | 2     | San Diego, Calif.     | 151                        | 100      | 25    | 12    | 8     | 4    | 13    |
| W.N. CENTRAL        | 780                        | 532   | 150   | 58    | 21   | 19 | 32    | San Francisco, Calif. | 153                        | 84       | 31    | 33    | 3     | 1    | 5     |
| Des Moines, Iowa    | 75                         | 54    | 13    | 5     | 2    | 1  | 6     | San Jose, Calif.      | 154                        | 101      | 33    | 11    | 6     | 3    | 11    |
| Duluth, Minn.       | 35                         | 27    | 7     | -     | -    | 1  | -     | Seattle, Wash.        | 99                         | 67       | 11    | 11    | 8     | 2    | 3     |
| Kansas City, Kans.  | 25                         | 19    | 6     | -     | -    | -  | 1     | Spokane, Wash.        | 56                         | 39       | 6     | 8     | 2     | 1    | 5     |
| Kansas City, Mo.    | 110                        | 67    | 27    | 10    | 5    | 1  | 8     | Tacoma, Wash.         | 33                         | 25       | 4     | 2     | 1     | 1    | 2     |
| Lincoln, Nebr.      | 31                         | 23    | 5     | 2     | -    | 1  | 2     | TOTAL                 | 12,229 <sup>††</sup>       | 7,822    | 2,345 | 1,240 | 450   | 365  | 593   |
| Minneapolis, Minn.  | 218                        | 149   | 33    | 20    | 10   | 6  | 9     |                       |                            |          |       |       |       |      |       |
| Omaha, Nebr.        | 79                         | 59    | 15    | 4     | 1    | -  | 1     |                       |                            |          |       |       |       |      |       |
| St. Louis, Mo.      | 107                        | 64    | 27    | 8     | 3    | 5  | 1     |                       |                            |          |       |       |       |      |       |
| St. Paul, Minn.     | 40                         | 25    | 10    | 3     | -    | 2  | 2     |                       |                            |          |       |       |       |      |       |
| Wichita, Kans.      | 60                         | 45    | 7     | 6     | -    | 2  | 2     |                       |                            |          |       |       |       |      |       |

\*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 3 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

‡Data not available. Figures are estimates based on average of past available 4 weeks.

*Homicides – Continued*

during July and August. Of the 680 cases for which hour of injury was reported, 69% occurred from 3 p.m. to 7 a.m.; fatal injuries most frequently occurred from 4 p.m. to 5 p.m.

*Reported by: Div of Safety Research, National Institute for Occupational Safety and Health, CDC.*

**Editorial Note:** The U.S. Department of Justice (2) and CDC's National Center for Health Statistics maintain overall information on homicides. However, this analysis of NTOF data represents a comprehensive attempt to identify work-related homicides. NTOF data is affected by the quality of death certificate information, which is obtained from next-of-kin, mortuary personnel, and certifying authorities (e.g., physicians, medical examiners, and/or coroners) and may vary in accuracy (3). Case ascertainment through NTOF is also affected by state reporting practices and data automation and retrieval procedures. Between 67% and 88% of all traumatic occupational fatalities can be identified through death certificates (4). Despite these limitations, NTOF data are useful for this preliminary characterization of homicide victims at the workplace.

The workplace homicide rate for women identified through NTOF is approximately 5% of the general homicide rate for U.S. women (79 per million women) (5). Data from the Federal Bureau of Investigation indicate that 42% of female homicide victims in the United States are aged 20–34 years (5), and NTOF data are comparable for workplace homicide. The NTOF findings extend the results of studies of fatal occupational trauma in Texas (6,7) and California (8), where homicide was a leading manner of death among working women and the highest workplace homicide rates for women occurred in those  $\geq 65$  years of age. The higher homicide rate for older women in Texas was interpreted as indicating that older women were more vulnerable targets and were less likely to survive traumatic assault, not as an artifact of underenumeration of working women in the oldest age group (7).

Race-specific workplace homicide rates differ from overall U.S. patterns. Nationally, black women have a substantially higher homicide rate than white women, with a rate ratio of 3.8 (9). In the workplace, black women remain at greater risk for homicide than white women, but the difference is less marked, with a rate ratio of 1.8.

Finally, the frequency of firearm involvement in the deaths of these women mirrors the national homicide pattern. Overall, the proportion of U.S. homicides caused by gunshot wounds ranges from 39% to 75%, depending on the region of the country (5); the NTOF data indicate similar proportions for workplace homicides, with parallel regional variation.

Other studies of violent occupational crime have found a greater risk for homicide in jobs with frequent contact with the public and/or the exchange of money (7,8,10,11). Effective training programs in conflict resolution and nonviolent response exist (9,12,13) and have been implemented in some retail settings (13). Additional risk-reduction strategies such as using locked drop-safes, posting signs indicating that only small amounts of cash are kept in the cash register, increasing the visibility of the work area to the general public, providing well-lit parking lots (13), controlling access to the premises, and, in certain settings, isolating workers behind bulletproof materials may be more widely applicable and should be carefully evaluated in these and other hazardous settings (14).

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*Homicides – Continued*

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Notices to Readers**ATSDR/National Governors' Association Report  
on Closed and Restricted Toxic Sites**

The National Governors' Association (NGA), through a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR), will release a report this month on the NGA's third biennial survey of sites closed or restricted to the public because of contamination by toxic substances. The report, "Restrictions Imposed on Contaminated Sites: A Status of State Actions" (1), describes the affected environmental media (i.e., land, groundwater, and surface water), types of contaminants, and nature of restrictions at 1705 sites nationwide.

The survey found that 69% of site restrictions pertained to groundwater use, particularly for drinking water supplies; 19% involved surface water contamination. Sixteen percent of the sites had both groundwater and land area contamination, and 6% were contaminated in all three media. At 741 of the groundwater sites, state agencies closed 7479 wells. Contaminants found most often in the reported groundwater sites varied by region, i.e., solvents in the industrialized northeast, pesticides and solvents in the more agricultural midwest, and ethylene dibromide (a grain fumigant) in the agricultural south.

Organic chemical pollution was found at 1306 (77%) of the 1705 sites; inorganic chemicals, at 618 (36%); petroleum products, at 163 (10%); and radionuclides, at 60 (4%). The five most common contaminants were trichloroethylene (221 sites), polychlorinated biphenyls (PCBs) (193 sites), lead (157 sites), benzene (148 sites), and perchloroethylene (108 sites).

*Toxic Sites – Continued*

The NGA survey counts only sites where state agencies have acted to protect the public from threats of toxic exposure; therefore, the NGA list may exclude highly contaminated Superfund sites that have little potential to expose human populations and include other sites with relatively low levels of contamination that could affect the health of nearby communities.

For further information on the survey and report, or to obtain copies, contact Policy Analyst, National Governors' Association, 444 North Capitol Street, Washington, DC 20001.

*Reported by: B Wells, National Governors' Association. Div of Health Education, Agency for Toxic Substances and Disease Registry.*

*Reference*

1. Wells B. Restrictions imposed on contaminated sites: a status of state actions. Washington, DC: National Governors' Association, 1990.

## **ATSDR Training Program on Health Assessments of Hazardous Sites**

The Agency for Toxic Substances and Disease Registry (ATSDR) will sponsor a training program on conducting health assessments to evaluate the health implications of hazardous exposures, prevent adverse health effects through recommendations, and identify actions or request health investigations. The program will comprise a general session on the basic components of a health assessment and an advanced session on specific case studies of environmental exposure.

The program will be held September 30, 1990, at the American Public Health Association (APHA) meeting in New York City. Applications are available from the Continuing Education Program, APHA, 1015 15th Street, NW, Washington, DC 20005. For additional information, contact ATSDR at (404) 639-0607.

## **Course on Childhood Lead Poisoning**

The Agency for Toxic Substances and Disease Registry, the National Association of County Health Officials (NACHO), and the Association of Occupational and Environmental Clinics will cosponsor a course on recent findings in childhood lead poisoning and their implications for public health workers. The course will be held September 30, 1990, at the American Public Health Association meeting in New York City. Additional information is available from Assistant Project Director, NACHO, 440 First Street, NW, Washington, DC 20001; telephone (202) 783-5550.

The *Morbidity and Mortality Weekly Report* is prepared by the Centers for Disease Control, Atlanta, Georgia, and is available on a paid subscription basis from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, (202) 783-3238.

The data in this report are provisional, based on weekly reports 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. Accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials, as well as matters pertaining to editorial or other textual considerations should be addressed to: Editor, *Morbidity and Mortality Weekly Report*, Centers for Disease Control, Atlanta, Georgia 30333; telephone (404) 332-4555, Mailstop C-08..

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