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Occupational Disease in Connecticut, 2011

This report covers data for 2009
and was prepared under contract for the
State of Connecticut Workers' Compensation Commission,
John A. Mastropietro, Chairman,
as part of the Occupational Disease Surveillance Program, operated in cooperation with the Connecticut Department of Labor and the Connecticut Department of Public Health

by
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A. Executive Summary

This report focuses on occupational *disease* reports from 2009 and 2008, and recent trends in reported cases. It does not address traumatic occupational *injuries*, which are addressed in the annual report on occupational injuries and illnesses by the Connecticut Department of Labor (http://www.ctdol.state.ct.us/osha/shstats.htm). Occupational diseases are typically harder to detect than injuries, since they often occur over longer periods of time, and can have multiple (including non-occupational) risks. Therefore, this report uses data from three primary sources as a way of establishing a more complete picture of occupational disease: Workers' Compensation First Report of Injury cases (WCC), physicians' reports under the Occupational Illnesses and Injury Surveillance System (OIISS), and the Bureau of Labor Statistics/Conn-OSHA Annual Survey.

Table A-1: Summary of Diseases Reported by Systems, 2007-2009

Type of Disease	BLS/Conn-OSHA			Workers' Compensation**			OIISS (Physicians)***		
	2007	2008	2009	2007	2008	2009	2007	2008	2009
Lung & poisonings	400	400	300	147	587	433	59	142	
Lead							363	364	309
Skin	600	700	600	72	275	220	273	302	
MSD	*	*	*	910	3607	4055	838	827	
Hearing loss	500	400	500	51	191	190		19	
Other	2,400	2,100	2,000	412	1,577	1,487	78	78	
Total	**3,900**	**3,600**	**3,400**	**1,592**	**6,237**	**6,385**	**1,611**	**1732**	

Sources: BLS: Bureau of Labor Statistics/Conn-OSHA; WCC: CT Workers' Compensation Commission, First Report of Injury database
OIISS: Occupational Illnesses and Injury Surveillance System
Notes: MSD= Musculoskeletal Disorders; Definitions vary somewhat between systems; OIISS infectious does not include bloodborne; OIISS lead cases are from the laboratory reporting system.
*****MSD is included in the "other" category for BLS/Conn-OSHA data
******Workers' Compensation had incomplete data in 2007.
*******OIISS data was not available for 2009; laboratory reports on lead are reported

Table A-1 summarizes the data from the three different sources for 2007 through 2009. ***Workers' Compensation data was incomplete in 2007, and OIISS data was not available for 2009***. Approximately 3,400 cases of occupational diseases were reported under the BLS/Conn-OSHA survey and 6,385 through the workers' compensation first report of injuries for 2009. For 2008, the last year available for OIISS, there were 3,600 reports for BLS, 6,237 for WCC, and 1,732 for OIISS. Reports in 2009 from the BLS system decreased by approximately 6% and increased 2% based on workers' compensation.

All systems were dominated by reports of **musculoskeletal disorders** (MSDs) such as Carpal Tunnel Syndrome and tendonitis, which accounted for approximately 60% of physician-reported cases in the OIISS (not including lab-based lead reports in the total) and Workers' Compensation (64%). MSD has not been broken out by BLS since 2002, and MSD cases are the main portion of the "other illness" category. **Lung diseases,** which include acute respiratory conditions and asthma accounted for 7-9% of cases. "Other diseases", which includes infectious diseases, physical hazards such as heat and cold exposures, allergies, cancer, and others, accounted for 5-59% of cases (the main component of "other diseases" in workers' compensation is infectious disease, but is MSD for BLS). **Skin conditions** accounted for 3-18% of the illnesses reported. **Lead poisoning** is tracked separately and is based on laboratory reports to the Connecticut Department of Public Health.

There was an overall illness rate of 25.6 cases per 10,000 workers based on the BLS survey, a 3% decrease from 2008. The CT rate was 20% higher than the average national rate, and was higher for all categories of illness. The highest specific sector rate was manufacturing at 54.2, with the highest rate for hearing loss (25.1) and fourth highest rate for "other" (primarily repetitive trauma) at 23.3. Local government was second highest

overall at 53.5, which included high rates of “other” (30.1), skin conditions (11.5), and respiratory conditions (11.0). Education and health was the other sector with much higher than average rates, at 40.3 overall, driven by the high rates of “other” conditions, skin conditions (9.7) and respiratory conditions (3.7). Information services had a high rate of “other” conditions, though was low for other illnesses. State government had a high rate of respiratory conditions (6.1).

Based on workers’ compensation data, 47% of reports were for women, but this varied by type of case (Figure D-1), with higher proportions of women for infectious disease (62% women), but lower levels for skin, and “other illness” (with only 20% women for heart and stress cases). Based on physician reports where race and ethnicity were known, 18% of reports were identified as Black, and 13% were identified as Hispanic. The largest number of cases were in the age range of 40-49 years old (31% of all cases), followed by those in their 50’s (25%), 30’s (21%), and 20’s (14%; Figure E-1). Only 17 cases were reported in workers less than 20 years of age (OIISS)

Of cases where known, physicians reported that 42% of cases had continuing exposure to the hazard that caused the illness, and in 19% of the cases it was reported that other workers were likely to be exposed to the same hazard.

The most common specific physician diagnoses for musculoskeletal disorders were epicondylitis (tennis elbow) with 22% of the cases, tendonitis (21%), Carpal Tunnel Syndrome (16%), and Tenosynovitis (10%). The most common specific causes noted for MSDs (Table E-4) were lifting, computer use and data entry, pushing or pulling, tools and vibration, and machines (WCC).

Non-specific respiratory conditions were the most common type of lung condition reported by physicians, with 50% of reports, followed by asthma at 20%, and upper respiratory conditions such as rhinitis and sinusitis (14%). Non-specific respiratory illnesses were the most common type of condition, with 34% of reports, followed by asthma and reactive airway dysfunction syndrome (RADS) at 22%, upper respiratory conditions such as rhinitis and sinusitis (14%) and bronchitis (4%). Asthma conditions were reported as caused by indoor air quality or mold, bleach, latex, ammonia, cleaners, coolant, dust from a vacuum cleaner, and medication.

Causes of skin conditions as attributed by physicians included poison ivy, gloves and latex (14 cases), solvents, diesel, bleach (2), coolants, propane, germicidal wipes, hand sanitizer, foam earplugs, spray cleaner, soap, acrylic acid, dirty drain water, ceiling tiles, fiberglass, and use of a respirator (OIISS).

Infectious disease and exposures were most commonly reported through workers’ compensation. There were 577 reports of exposure to bloodborne pathogens (including reports of exposure to HIV/AIDS and hepatitis C), accounting for 68% of all infectious disease reports. These included 301 reports of exposures to human bites (including 2 reports of exposure to human urine), 155 reports of exposure to blood, and 100 needlesticks or cuts from surgical instruments that resulted in blood exposure. There were 40 cases of tuberculosis infection (PPD conversion) or exposures to clients with TB. There were 87 reports of tick bites, rashes from tick bites and/or Lyme disease attributed to occupational exposures. There were 36 reports of exposure or cases of MRSA (Methicillin-resistant Staphylococcus aureus, or staph infection that is resistant to antibiotics) or other staph infection, 20 cases of scabies exposures/illnesses, and 20 reports of meningitis exposure. There were 22 reports of exposure to or cases of h1n1 flu. (WCC).

B. Introduction

This report provides an overview of what is known about occupational disease in Connecticut based on 2009 data. It is one of a series of annual reports on occupational disease developed for the Connecticut Workers' Compensation Commission under the Occupational Illnesses and Injury Surveillance System (OIISS). By monitoring trends, this system helps prevent occupational disease by targeting prevention activities such as education, encouraging effective safety and health committees and programs, and investigating of clusters of disease. The system is a cooperative venture by the Department of Public Health, Department of Labor, Workers' Compensation Commission, and a number of occupational health clinics (Connecticut General Statutes 31-396 to 31-402). Physicians are required to report occupational disease under Connecticut General Statute 31-399.

This report combines available data from a number of systems:

- Bureau of Labor Statistics/Connecticut Occupational Safety and Health Administration (BLS/Conn-OSHA) Survey of Occupational Injuries and Illnesses
- Connecticut Adult Blood Lead Epidemiology Surveillance System (ABLES)
- Occupational Illnesses and Injury Surveillance System (referred to as Physicians' Reports or OIISS in this report; only available through 2008).
- Connecticut Workers' Compensation Employer First Reports of Injury (referred to as Workers' Compensation or WCC in this report)

Acknowledgements
Several people have contributed data and other help to this report. We would like to thank especially Erin Wilkins of the Department of Labor; Bob Artus and Peter Miecznikowski of the Workers' Compensation Commission; and Thomas St. Louis and Albert Deloreto of the Department of Public Health. Colleagues at the Division of Occupational and Environmental Medicine at the University of Connecticut Health Center have contributed ideas and resolved questions.

Overview of Report
This report covers occupational disease data for calendar year 2009 (OIISS only available through 2008). It is divided into three primary sections based on the data source. It begins with the BLS/Conn-OSHA time trends, followed by data from the Workers' Compensation First Reports of Injury, followed by data from the Physicians' Reports.

All three data sources provide somewhat different information. For example, the BLS/Conn-OSHA provides comparisons to U.S. data, but is based on a survey, rather than all reports. Workers' Compensation data includes all lost-time cases for all employers, but does not include physicians' diagnosis. The Physicians' reporting system has more precise diagnoses, but a large number of physicians do not report into the system. Prior studies of cumulative trauma (musculoskeletal disorders) reports in Connecticut have found that there is only a small overlap between the Workers' Compensation Reports and the Physicians' Reports, indicating that total numbers are higher than the individual system totals.

C. Bureau of Labor Statistics/Connecticut Occupational Safety and Health Administration Surveys

In cooperation with the U.S. Bureau of Labor Statistics (BLS), Conn-OSHA conducts an annual survey of employers for job-related injuries and illnesses. Conn-OSHA issues an annual report that provides data on injuries (available at http://www.ctdol.state.ct.us/osha/shstats.htm). Our report focuses on illnesses, and includes data from Conn-OSHA that is not published in that report. Since these statistics are based on a survey rather than a census, numbers and rates are estimated and are rounded off. The Connecticut Department of Labor acknowledges that the BLS/Conn-OSHA survey under-counts occupational diseases, particularly chronic diseases, since these are frequently not recognized nor reported.

Occupational Illnesses in 2009

There were approximately 3,400 reported cases of occupational illnesses in 2009 (Figure C-1 and Table C-1) with a rate of 25.6 per 10,000 workers, a 3% decrease in rate from 2008. Two categories decreased, including a 3% decrease in "other illnesses" (which consists primarily of repetitive trauma cases), which is the largest category of cases and skin conditions (8% decrease). The rate of respiratory illnesses increased by 5% and hearing loss increased by 30%. Poisonings, too small to meet publishing criteria in 2009, decreased from 100 cases in 2008.

Table C-1: Occupational Disease by Type, 2008 - 2009, BLS/Conn-OSHA

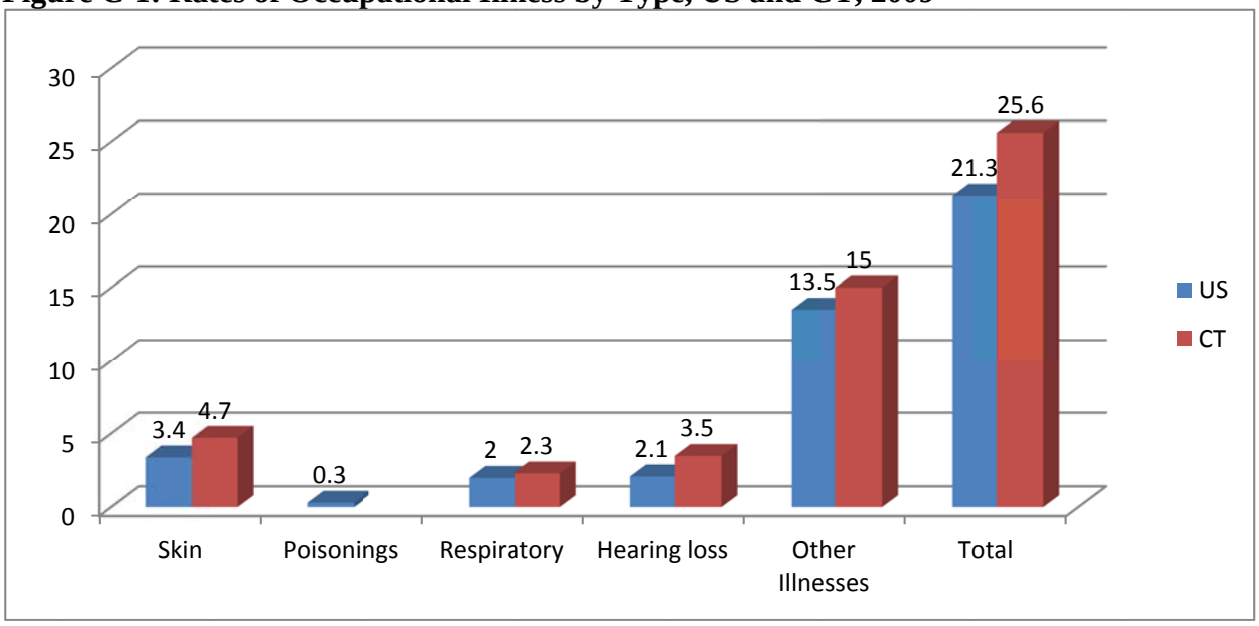
	2008		2009		% Change
	Cases	Rates	Cases	Rates	in Rate
Skin	700	5.1	600	4.7	-8%
Poisonings	100	1	--	--	--
Respiratory	300	2.2	300	2.3	5%
Hearing loss	400	2.7	500	3.5	30%
Other illnesses	2,100	15.4	2,000	15	-3%
Total	**3,600**	**26.3**	**3,400**	**25.6**	**-3%**

Source: BLS/Conn-OSHA; Rates are per 10,000 workers, adjusted for hours worked. Total differs due to rounding for the survey. Includes public sector. "—" indicates numbers too small/unreliable to publish.

Overall rates for Connecticut in 2009 were higher than the U.S. rates for all types of illness (Figure C-1). The overall Connecticut rate (25.6 cases per 10,000 workers) was 20% higher than U.S. rate (21.3). Connecticut's occupational illness rate was 32nd out of 41 reporting states (where a #1 ranking is the lowest rate). The higher CT rates in relation to the U.S. were driven by the large categories of hearing loss (67% higher), skin conditions (38% higher), respiratory conditions (15% higher), and "other" (which includes primarily repetitive trauma, 11% higher). Rates are adjusted for hours worked, and are based on 41 states that report into the system. Overall illness rates were 22.9 private sector and 46.3 for public sector in Connecticut compared to U.S. average rates of 18.3 (25.1% higher for CT) and 39.1 (18.4% higher) respectively.

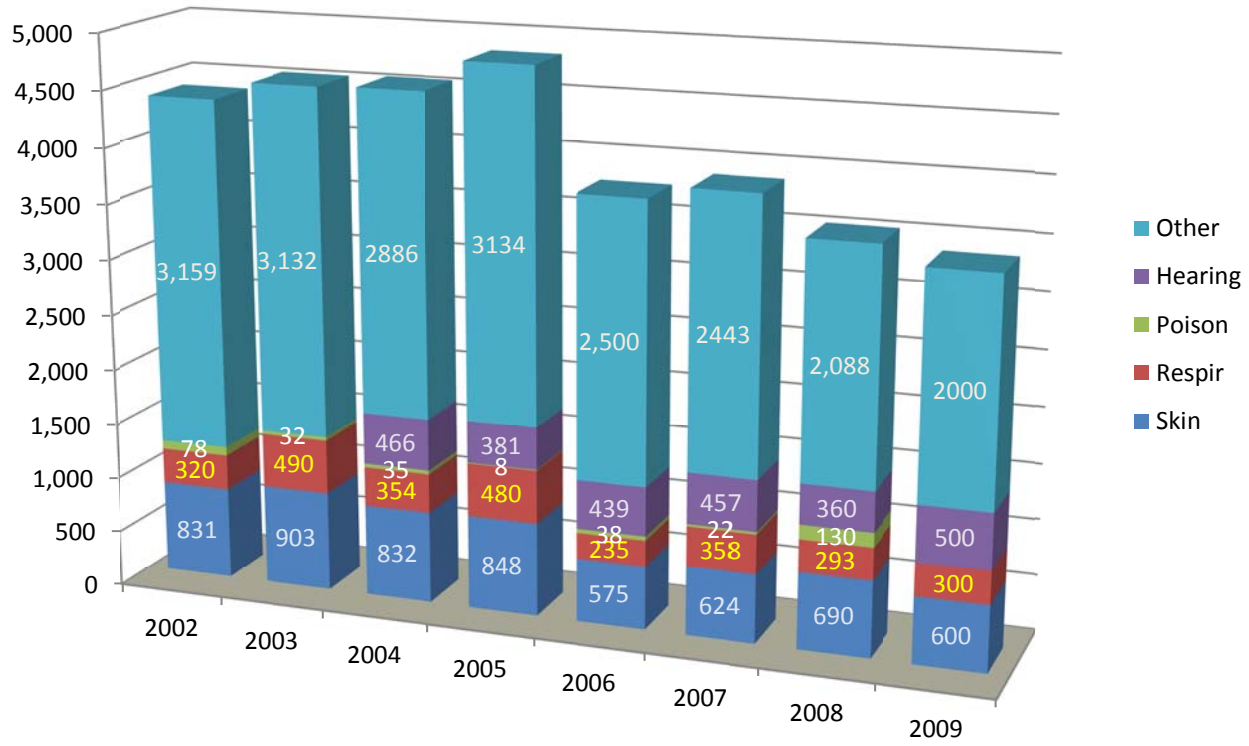
In Connecticut, the number of illnesses increased slightly from 2002-2005, then dropped 22% in 2006, followed by relatively stable numbers through 2009 (Figure C-2).

Figure C-1: Rates of Occupational Illness by Type, US and CT, 2009



Source: BLS and Conn-OSHA. Rates per 10,000 workers, adjusted for hours worked.

Figure C-2: Cases of Occupational Disease by Type and Year, CT, 2002-2009



Source: BLS/Conn-OSHA Survey

Illnesses by Industry

Numbers and rates by industry sector for 2009 are presented in Table C-2. Overall, the adjusted rate is 25.6 cases of occupational illness per 10,000 CT workers, slightly lower than the 2008 rate of 26.3. The overall private sector rate was 22.9 (compared to 24.3 in 2008), with a government rate of 46.3 (102% higher than the private sector rate); and slightly higher than last year's rate of 41.6.

Table C-2: Illness Rates per 10,000 Workers by Industry and Type of Illness, CT, 2009

	Total		Skin		Respiratory		Poison		Hearing		Other	
	Rate	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**
Total, all industries	25.6	3,400	4.7	600	2.3	300	--	--	3.5	500	15.0	2,000
Private Industry only	22.9	2,700	4.0	500	1.4	200	--	--	4.0	500	13.5	1,600
Goods Producing	42.9	1,000	5.3	100	0.9	--	--	--	19.0	400	17.7	400
Natural resources and mining	--	--	--	--	--	--	--	--	--	--	--	--
Construction	8.1	--	4.5	--	--	--	--	--	--	--	--	--
Manufacturing	54.2	1,000	5.1	100	--	--	--	--	25.1	400	23.3	400
Service Providing	17.9	1,700	3.7	300	1.6	100	--	--	--	--	12.5	1,200
Trade, transport, utilities	13.7	300	1.7	--	0.7	--	--	--	--	--	10.9	300
Information	28.9	100	--	--	--	--	--	--	--	--	27.5	100
Financial activities	8.4	100	--	--	--	--	--	--	--	--	8.0	100
Professional/business services	10.1	200	3.2	100	--	--	--	--	--	--	5.8	100
Education and health	40.3	900	9.7	200	3.7	100	--	--	--	--	26.8	600
Leisure and hospitality	6.4	100	3.2	--	2.1	--	--	--	--	--	--	--
Other services	--	--	--	--	--	--	--	--	--	--	--	--
Government total	46.3	700	10.0	200	9.2	100	--	--	--	--	26.5	400
State Government	33.8	200	--	--	6.1	--	--	--	--	--	20.2	100
Local Government	53.5	500	11.5	100	11.0	100	--	--	--	--	30.1	300

Source: Conn-OSHA
Rates are adjusted for hours worked, and are per 10,000 full-time workers; Cases are in 1,000's.
--Indicates too little data for reliable estimates

The highest specific sector rate was manufacturing at 54.2, with the highest rate for hearing loss (25.1) and fourth highest rate for "other" (primarily repetitive trauma) at 23.3. Local government was second highest overall at 53.5, which included high rates of "other" (30.1), skin conditions (11.5), and respiratory conditions (11.0). Education and health was the other sector with much higher than average rates, at 40.3 overall, driven by the high rates of "other" conditions, skin conditions (9.7) and respiratory conditions (3.7). Information services had a high rate of "other" conditions, though was low for other illnesses. State government had a high rate of respiratory conditions (6.1).

Lost-Time Illnesses

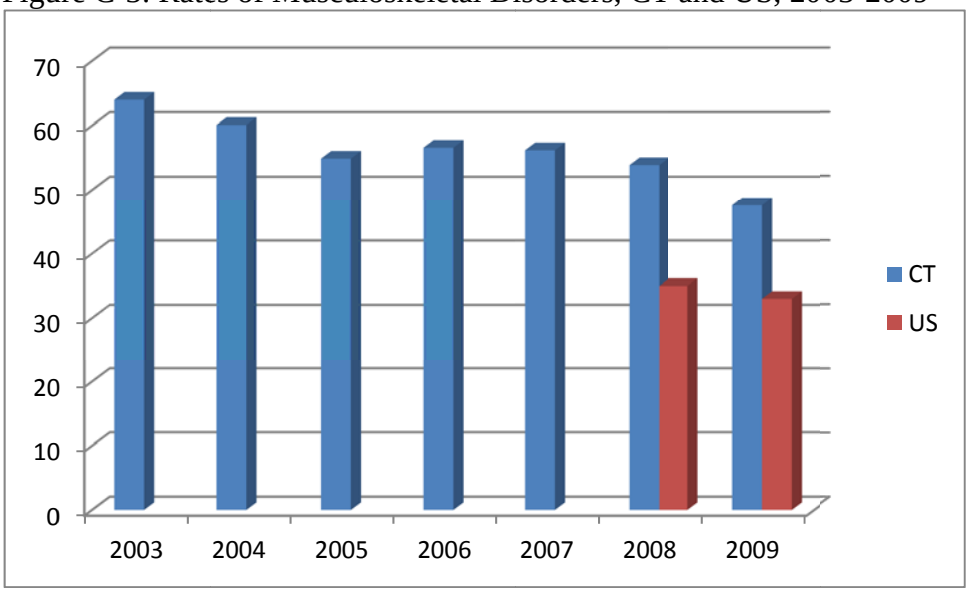
BLS obtains additional data for the subset of cases that result in lost worktime (restricted work cases are not included in this section, which is about half again the number of lost worktime cases), that provide additional detail on specific conditions and causes. We are presenting here this data for conditions that are more chronic in nature (usually classified as occupational illness).

Musculoskeletal Conditions

Musculoskeletal conditions with lost time decreased to 6,250 cases (47.6 cases per 10,000 workers), down from a rate of 53.9 in 2008 (Figure C-3). The Connecticut rate is 44% higher than the national MSD rate of 33.0. MSD accounted for 29% of the total of 21,340 of lost time injuries and illnesses in Connecticut. Rates in

Connecticut have declined 26% over the 7-year period. National rates for all private and public employees have only been available since 2008.

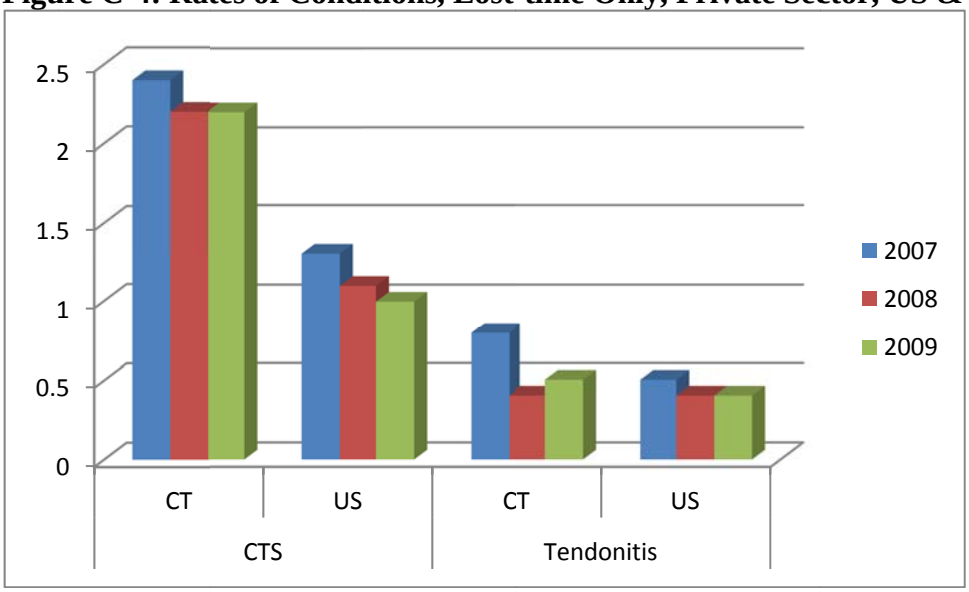
Figure C-3: Rates of Musculoskeletal Disorders, CT and US, 2003-2009



Source: BLS Website http://data.bls.gov/cgi-bin/dsrv?ch
Rates are cases per 10,000 full time employees

Musculoskeletal conditions are the most common category of specific injury and illness conditions, and is a category that includes both chronic conditions and sprains and strains from overexertion (approximately 75% of these cases nationally). BLS defines this fairly complex category as "Includes cases where the nature of injury is: sprains, strains, tears; back pain, hurt back; soreness, pain, hurt, except back; carpal tunnel syndrome; hernia; or musculoskeletal system and connective tissue diseases and disorders and when the event or exposure leading to the injury or illness is: bodily reaction/bending, climbing, crawling, reaching, twisting; overexertion; or repetition. Cases of Raynaud's phenomenon, tarsal tunnel syndrome, and herniated spinal discs are not included."

Figure C-4: Rates of Conditions, Lost-time Only, Private Sector, US & CT, 2007-2009



Source: BLS Website http://data.bls.gov/cgi-bin/dsrv?ch
Rates are cases per 10,000 full time employees; CTS=Carpal Tunnel Syndrome

Carpal Tunnel Syndrome (CTS) was the most common specific illness in Connecticut, decreasing slightly from 2.4 cases per 10,000 workers in 2007 to 2.2 in 2008 (Figure C-4). **Tendonitis** dropped from 0.7 cases to 0.4 cases per 10,000. Connecticut was double the national rates for Carpal Tunnel Syndrome, but about the same as the national rate for tendonitis. CTS had a very high number of lost work days, with a median of 22 days of lost time per case (compared to 7 days for all cases of injury and illness) in Connecticut, and tendonitis was even higher with a median of 36 days.

Connecticut lost time cases coded as "**repetitive motion**" for cause increased slightly to 5.4 cases per 10,000 workers from 5.1 in 2008; this Connecticut rate was 59% higher than the U.S. rate of 3.4. Repetitive motion lost time cases had a median of 22 days away from work.

D. Workers' Compensation First Report of Injury Data

There were a total of 6,385 reports in the Workers' Compensation First Report of Injury Database for 2009. There was a slight increase in reports from 2008, driven by an increase in the largest category of MSD, with decreases in most other categories of illness

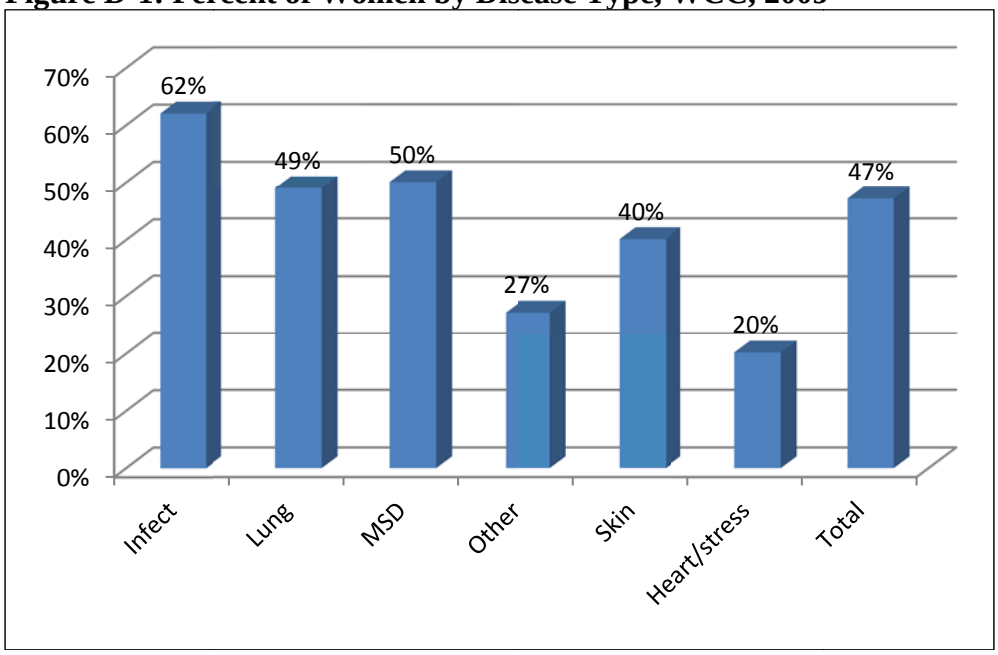
Almost two-thirds (64%) of reports were due to chronic musculoskeletal disorders (MSD) such as Carpal Tunnel Syndrome and tendonitis. Infectious disease accounted for 13% of the cases, lung diseases (including both acute respiratory conditions and chronic conditions such as asthma and asbestos-related illnesses and exposures) 7%, skin diseases 3%, and "Other Illnesses" (which includes heart conditions, stress cases, noise-induced hearing loss, and other conditions) 13%.

Table D-1: Occupational Disease by Type, WCC, 2008 - 2009

	2008	2009		
Illness type	**Cases**	**Cases**	**% of total**	**% Change**
Musculoskeletal Disorders (MS)	3607	4055	64%	**12%**
Infectious Disease	943	845	13%	**-10%**
Lung Disorders	587	433	7%	**-26%**
Skin Disorders	275	220	3%	**-20%**
Other Illnesses	825	832	13%	**1%**
Total	**6,237**	**6,385**	**100%**	**2%**

Overall, 47% of reports were for women, but this varied by type of case (Figure D-1), with higher proportions than overall of women for infectious disease (62% women), but lower levels for skin, and "other illness" (with only 20% women for heart and stress cases).

Figure D-1: Percent of Women by Disease Type, WCC, 2009



Numbers and rates of occupational illnesses are presented by major North American Industry Classification System (NAICS) sector in Figure D-2 and Table D-2. Ninety-six percent (96%) of reported cases were able to be coded for major industry sector. Government had the largest number of cases (21%; some additional

government cases are counted in the education and health care sector), followed by education and health services (20%), manufacturing (19%), and wholesale and retail trade (16%).

Figure D-2 Occupational Illness Cases by Industry, WCC, CT, 2009

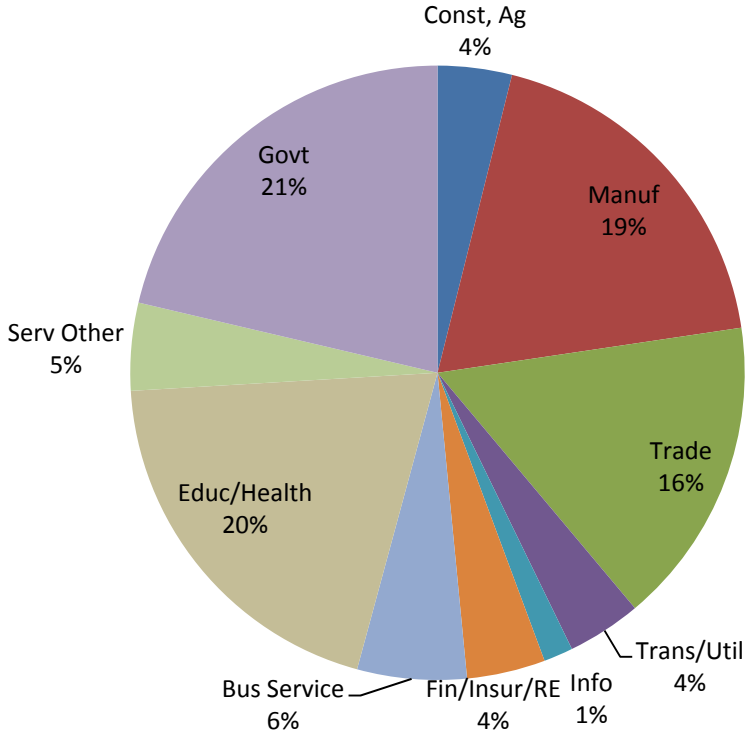


Table D-2: Cases of Occupational Disease by Major Industry Sector, WCC, 2009

NAICS Sector	Cases	%	Rate	Employment	% Employment
Construction/Ag/Mine	240	4%	3.7	65,000	4%
Manufacturing	1,154	19%	6.5	178,200	11%
Trade	999	16%	4.0	247,200	15%
Transport/Utilities	240	4%	5.1	46,900	3%
Information Services	95	2%	2.5	38,500	2%
Finance/Insurance/RE	254	4%	1.8	140,700	9%
Business Services	354	6%	1.8	200,300	12%
Education/Health	1,221	20%	4.2	292,700	18%
Leisure/Other Services	284	5%	1.3	213,800	13%
Government*	1,312	21%	6.3	207,900	13%
Unknown	232				
Total	**6,385**		**3.9**	**1,629,300**	**100%**

Notes: Employment is adjusted for hours worked. Rows do not add up to total due to reports that could not be coded for industry. Rates are illnesses per 1,000 workers

*Government illnesses do not include some cases that are classified under other categories, such as education and health services.

The percent of illnesses by industry may be compared to the percent of employment to understand which industries are at higher risk for illness. Table D-2 shows these figures, excluding cases where the industry was unknown. Overall, the rate of illness is approximately 3.9 cases per 1,000 workers, with the highest rates for

manufacturing (6.5, or 67% higher than the overall rate) and government (6.3; the actual government rate is higher because there are also government worker cases classified under education and other sectors), transportation/utilities (5.1), and education/health care (4.2).

Table D-3: Type of Disease by Industry Sector, WCC, 2009

	Other		Lung		Infectious		MSD		Skin		**Total**	
Construction/Ag/Mine	15	2%	24	6%	4	0%	188	5%	9	4%	240	**4%**
Manufacturing	175	22%	73	18%	4	0%	871	22%	31	14%	1154	**19%**
Trade	100	12%	25	6%	11	1%	839	22%	24	11%	999	**16%**
Transport/Utilities	19	2%	22	5%	20	2%	172	4%	7	3%	240	**4%**
Information Services	14	2%	1	0%	1	0%	76	2%	3	1%	95	**2%**
Finance/Insurance/RE	41	5%	16	4%	11	1%	183	5%	3	1%	254	**4%**
Business Services	35	4%	21	5%	23	3%	264	7%	11	5%	354	**6%**
Education/Health	78	10%	86	21%	407	49%	620	16%	30	14%	1221	**20%**
Leisure/Other Services	44	5%	21	5%	24	3%	180	5%	15	7%	284	**5%**
Government	283	35%	128	31%	324	39%	495	13%	82	38%	1312	**21%**
Subtotal	804	100%	417	100%	829	100%	3888	100%	215	100%	6153	**100%**
Unknown	28		16		16		167		5		**232**	
Total	**832**		**433**		**845**		**4055**		**220**		**6385**	

Table D-3 provides the detail of industry sector by type of condition. Patterns of illness by industry differed by the type of illness, although government was high in all categories, particularly when including the education sector. Infectious diseases were concentrated in education/health (49%) and government (39%). Lung diseases were concentrated in government (31%), education/health (21%), and manufacturing (18%). Musculoskeletal disorders (MSD) were most prevalent in manufacturing (22%), and trade (22%), education/health (16%), and government (13%). Skin cases were most common in government (38%), education/health (14%), manufacturing (14%), and trade (11%). Other illnesses, which include heart and hypertension, stress, and hearing loss cases (see below) were most common in government (35%), manufacturing (22%), trade (12%) and education/health (10%). These figures are based on numbers of cases and not rates, so they are not adjusted for the employment size in the different sectors (which can be noted in Table D-2 for comparison).

Table D-4 shows those specific industry (3-digit NAICS code) sectors that reported 50 or more cases of occupational illness in 2009. The list is ordered by the sectors with the highest number of cases listed first. Government had the largest number of illnesses at 1,050 reports; Educational Services (635 reports) also is primarily local government, as is Police and Fire Departments (173 reports).

Transportation Equipment Manufacturing had the next highest number (465 cases), followed by Food and Beverage Stores (294), Fabricated Metal Product Manufacturing (181), Nursing and Residential Care (173 cases), Ambulatory Health Care Services (171), Hospitals (167), Specialty Trade Contractors (161), Administrative and Support Services (153), Professional, Scientific and Technical Services (127), Merchant Wholesalers (114), and General Merchandise Stores (110).

Table D-4: Specific Industry Sectors with over 50 Cases of Occupational Disease, WCC, 2009

Specific Industry Sector	NAICS	Cases
Local government*	921	1020
Educational Services	611	635
Transportation Equipment Manufacturing	336	465
Food and Beverage Stores	445	294
Fabricated Metal Product Manufacturing	332	181
Police and fire	922	173
Nursing and Residential Care Facilities	623	173
Ambulatory Health Care Services	621	171
Hospitals	622	167
Specialty Trade Contractors	238	161
Administrative and Support Services	561	153
Professional, Scientific, and Technical Services	541	127
Merchant Wholesalers, Nondurable Goods	424	114
General Merchandise Stores	452	110
Merchant Wholesalers, Durable Goods	423	96
Food Services and Drinking Places	722	95
Credit Intermediation and Related Activities (Banks)	522	92
Electric Power Generation	221	90
General Purpose Machinery Manufacturing	333	76
Insurance Carriers and Related Activities	524	76
Social Assistance	624	75
Computer and Electronic Product Manufacturing	334	74
Hardware Stores	444	74
Food products	311	69
Health and personal care stores	446	65
Telecommunications	517	60
Misc. retail stores	453	54
Transit and ground passenger transport	485	53
Motor vehicle dealers	441	53
Primary metal manufacturing	331	53

*Some local government cases are tabulated under other specific sectors, such as educational services and police and fire.

Musculoskeletal Disorders (MSDs)

"Musculoskeletal disorders" is the currently-used term for conditions also known as cumulative trauma disorders or repetitive strain injuries. There were 4,055 MSDs reported to workers' compensation in 2009, an increase of 12.9% from 2008 (Table D-5). MSDs accounted for over half (64%) of the reported occupational diseases to Workers' Compensation. MSDs presented here do not include any cases for the lower back (since the descriptions of back conditions are typically not sufficient to be able to distinguish between acute and cumulative back injuries), nor do MSDs include any acute injury condition from sudden events.

Strains and sprains (which does not include acute strains or sprains) was the most common category of MSD, with 54% of reports (Table D-5). Carpal Tunnel Syndrome (CTS), which is a pinching of the median nerve at the wrist, accounted for 12% of total MSD reports. Other nerve-related problems (with symptoms of numbness or tingling) accounted for an additional 4% of cases. Tendon-related problems included tendonitis and tenosynovitis (2%), and epicondylitis ("tennis elbow" or "golfer's elbow", 1%), ganglion cysts (1%), and trigger finger (1%). A large number of cases did not have a specific description other than "inflammation" (1%), or "pain" (21%), or no specific description (2%).

Table D-5: Musculoskeletal Disorders (MSDs) by Type, WCC, 2008 – 2009

	2009		2008	
MSD Type	**Cases**	**%**	**Cases**	**Change**
Sprain/strain	2,193	54.1%	1,987	10.4%
Pain	859	21.2%	553	55.3%
Carpal Tunnel Syndrome	484	11.9%	484	0.0%
Numbness	147	3.6%	152	-3.3%
Other/Unknown	95	2.3%	74	28.4%
Tendonitis/tenosynovitis	85	2.1%	78	9.0%
Inflammation	54	1.3%	175	-69.1%
Ganglion cyst	42	1.0%	26	61.5%
Epicondylitis	28	0.7%	27	3.7%
Trigger finger	24	0.6%	17	41.2%
Rotator cuff	23	0.6%	12	91.7%
Arthritis/bursitis	17	0.4%	15	13.3%
Plantar fasciitis	4	0.1%	7	-42.9%
Total	4,055	100.0%	3,607	12.4%

Almost all the cases of MSD were in the upper extremity of the body (note that lower back cases were excluded from these figures). Almost half (41%) of total MSD cases were for the hand, wrist, and lower arm (Table D-6). Other affected parts of the body included 7% elbow and 25% shoulder, neck, and "upper extremity". Only 13% were for the legs, knees and feet.

Table D-6: Musculoskeletal Disorders by Part of Body, WCC, 2009

Part of body	Cases	Percent
Lower arm, wrist, hand	1,649	41%
Upper arm, shoulder, upper extremity	1,027	25%
Legs, knees, and feet	539	13%
Elbow	299	7%
Neck and upper back	158	4%
Multiple	306	8%
Other/unknown	77	2%
Total	**4,055**	**100%**

Causes of conditions were often incomplete, overlapping, and not consistently coded nor described. Approximately 80% of MSD cases had enough description to show some cause. Of the MSDs that could be classified, the most frequently mentioned cause was the broad category of "repetition" (24% of cases), although this was frequently just from a general description, and often used to describe any chronic musculoskeletal problem (see Table D-7). This was followed by lifting (21%), pushing or pulling (16%), computing and clerical tasks that included typing, keying, mouse use, phone use, etc, (7%), and tool use, including references specifically to pneumatic tools or vibration exposure (7%). A couple of specific categories include sports or exercise (54 cases), and cake decorating with 11 cases.

Table D-7: Reported Causes of Musculoskeletal Disorders (MSD), WCC, 2009

Cause of MSD	Reports	%
Repetitive	790	24%
Lifting	699	21%
Push/pull	538	16%
Computer/clerical	243	7%
Tools/vibration	225	7%
Walking/running/moving	93	3%
Bending/kneeling/crawling	90	3%
Climbing	74	2%
Reaching	61	2%
Grasping/gripping/squeezing	59	2%
Cleaning	57	2%
Exercise/sports/training	54	2%
Driving	51	2%
Machine	42	1%
Twisting	38	1%
Assembly	37	1%
Carrying	33	1%
Shoveling/sweeping	22	1%
Sitting/standing	21	1%
Tightening	14	0%
Selecting/sorting/inspecting	12	0%
Cake decorating	11	0%
Packing	11	0%
Throwing	7	0%
Painting	6	0%
Sub-Total	**3,288**	**100%**
Unknown/other	**767**	
Total	**4,055**	

Infectious Diseases

There were 848 reports of infectious diseases or exposures in the database for 2009 (Table D-8), a 10% decrease from 2008. Infectious disease reports include both actual disease and exposure to potentially infectious

agents. There were 577 reports of exposure to bloodborne pathogens (including reports of exposure to HIV/AIDS and Hepatitis C), accounting for 68% of all infectious disease reports. These included 301 reports of exposures to human bites (including 2 reports of exposure to human urine), 155 reports of exposure to blood, and 100 needlesticks or cuts from surgical instruments that resulted in blood exposure.

There were 40 cases of tuberculosis infection (PPD conversion) or exposures to clients with TB. There were 87 reports of tick bites, rashes from tick bites and/or Lyme Disease attributed to occupational exposures. There were 36 reports of exposure or cases of MRSA (Methicillin-resistant Staphylococcus aureus, or staph infection that is resistant to antibiotics) or other staph infection, 20 cases of scabies exposures/illnesses, and 20 reports of meningitis exposure. There were 22 reports of exposure to or cases of h1n1 flu.

Table D-8: Infectious Diseases and Exposures by Type, WCC, 2008 - 2009

	2008		2009		
Illness	**Cases**	**%**	**Cases**	**%**	**Change**
Human bite/Urine	324	34%	301	36%	-7%
Blood/body fluids	166	18%	155	18%	-7%
Sharp and needlestick exposures	144	15%	100	12%	-31%
Lyme Disease/tick bite	91	10%	87	10%	-4%
TB/ppd conversion/exposure	35	4%	40	5%	14%
MRSA/staph	41	4%	36	4%	-12%
h1n1 flu			22	3%	
Hepatitis	18	2%	21	2%	17%
Scabies	40	4%	20	2%	-50%
Meningitis exposure	14	1%	20	2%	43%
Head lice			11	1%	
Rabies	13	1%	8	1%	-38%
Chicken pox, measles, whooping cough	16	2%	7	1%	-56%
e-coli			6	1%	
Other infectious	41	4%	14	2%	-66%
Total	**943**	**100%**	**848**	**100%**	**-10%**

Recent court decisions have broadened the definition of compensable disease to include exposures, particularly where exposure requires medical treatment such as prophylactic treatments such as for tuberculosis (TB) and AIDS (HIV) exposures. There has recently been considerable attention paid to Lyme Disease among outdoor workers, resulting in more reports of tick bites, although these reports were slightly down in 2009. It is often difficult to determine whether the first report of injury was actual disease or only exposure (for example, actual Lyme Disease or only a report of a tick bite). Similarly, it is usually not clear in the reports for needlestick and sharps injuries whether the source patient or client was actually infected with any of the known bloodborne diseases. There were additional reports of exposure to “spit” or “sputum” that are not reported here, since risks tend to be very low from such exposures. Diseases that can be contracted through blood and body fluid exposures include hepatitis B, C and HIV. Human bites or exposures to body fluids such as urine are also related to bloodborne diseases. Transmission is much less likely when a worker is exposed to urine or a human bite than transmission occurring from blood, particularly for HIV. Blood to blood exposure is the highest risk, such as from needlesticks or sharps injuries. Altercations or arrests with prisoners or clients accounted for the vast majority of human bites as well as some of the other bloodborne exposures.

Acute Respiratory Conditions and Poisonings

There were 271 cases of acute respiratory conditions in the database for 2009 and 24 cases of poisonings from carbon monoxide, gases, or lead (see Table D-9), an overall decrease of 35% from 2008. Exposure to dust or fumes were the most common cause of illness (25%), followed by chemical exposures (18%), smoke (16%), indoor air quality (IAQ) or mold (14%), and cleaning products (6%). See the next section below for chronic lung conditions.

Table D-9: Acute Respiratory Conditions and Poisonings by Cause, WCC, 2008 - 2009

Cause	2008		2009		
Respiratory	**Cases**	**%**	**Cases**	**%**	**Change**
Dust/fumes	72	16%	73	25%	1%
Chemical exposure	114	25%	54	18%	-53%
Smoke, Fire	98	21%	47	16%	-52%
IAQ/mold/odor	69	15%	40	14%	-42%
Cleaning	20	4%	17	6%	-15%
Other	50	11%	40	14%	-20%
Poisoning					
Carbon monoxide/gas/fumes	34	7%	24	8%	-29%
Total	**457**	**100%**	**295**	**100%**	**-35%**

In addition to the general categories of smoke, cleaners, disinfectants, and solvents, specific chemical exposures mentioned included paint (including epoxy, 11), bleach (6), ammonia (4), minnicare (4), discharged fire extinguisher (4), carpet cleaners (2), die pack (2), sealer, ammonium hydroxide, oxine, sodium decanoate, fabric protector, sulfur, bug bomb, acetone, adhesive, Draino, Simple Green, off gassing from boxes of flip flops, powder from broken fluorescent bulbs, battery fumes, bondo, welding fumes, Leisuretime spa additive, ant and roach killer, refrigerant fumes, and gasoline.

Chronic Lung Conditions

There were 138 cases of chronic lung conditions in 2009, and increase of 23% from 2008 (Table D-10). These included asbestos-related diseases and exposures, occupational asthma, and other chronic lung diseases. Acute lung diseases are classified under respiratory disease (above).

Asbestos

There were 87 reports of asbestos-related disease or exposures in 2009, including 4 cancer cases. The descriptions of the cases often made it difficult to determine whether the cases were actual disease or only exposure to asbestos since it is difficult to know whether they are describing historic exposures that contributed to current disease, or current exposures that raise the risk of future disease), although there was at least one fatality and four mesothelioma cases (listed under cancer).

Asbestos exposure is known to increase the risk of lung disease and cancer. If disease occurs as a result, it often appears between 10-40 years after exposure. Asbestos disease may be under-reported by traditional surveillance sources such as Workers' Compensation. Industries for asbestos conditions included government (32), transportation equipment manufacturing (15), construction contractors (14), and education (9).

Other Chronic Lung Conditions

There were 45 occupational asthma cases reported in 2009, an increase of 45%. The most common causes mentioned were indoor air quality or mold (15), chemicals and cleaners (7), and dust/fumes (3). Government (7) and schools (6) were the most common industries for asthma.

Table D-10: Chronic Lung Diseases by Type, WCC, 2008 - 2009

Illness	2008	2009	Change
Asbestos-related	50	83	66%
Asthma/bronchitis	31	45	45%
Allergies	13	5	-62%
Cancer	11	5	-55%
Silicosis	2		
Other chronic lung	5		
Total	**112**	**138**	23%

Skin Conditions

There were 220 skin conditions in the database in 2009 (Table D-11), a decrease of 20%. There were 107 cases (49% of cases) of contact dermatitis from poison ivy or other plants. There were 14 cases of allergic reactions to latex, gloves, or other clothing and 7 associated with soap or cleaning products. There were 36 cases caused by chemicals including coolant/oil (11), epoxy, insecticides (3), adhesive, “Pro-tap”, and carbon forms. Government (82 cases), schools (16), and transportation equipment manufacturing (16) were the most frequent industry sectors.

Table D-11: Skin Diseases by Cause, WCC, 2008 - 2009

Category	2008	2009	%	Change
Poison ivy/plants	128	107	49%	-16%
Chemical	41	36	16%	-12%
Gloves/latex/clothing	10	14	6%	40%
Allergic	8	7	3%	-13%
Soap/cleaning	8	7	3%	-13%
Patient care	11	2	1%	-82%
Other/unknown	69	47	21%	-32%
Total	**275**	**220**	**100%**	**-20%**

Table D-12: Heart and Hypertension Conditions by Type, WCC, 2008 - 2009

Category	2008	2009	%	Change
Hypertension	40	99	35%	148%
Chest pain/angina/symptoms	169	71	25%	-58%
Heart attack	59	51	18%	-14%
Stroke/clots	10	21	7%	110%
Other heart	7	40	14%	471%
Total	**285**	**282**	**100%**	**-1%**

Stress and Heart Conditions

Heart and Hypertension

There were 395 cases involving heart conditions, stroke, chest pain, hypertension, or stress in the database for 2009 (Tables D-12 and D-13), a slight increase from 2008. Fifty-one (51) cases specifically mentioned heart attacks or myocardial infarctions, 21 reported strokes or blood clots, and 71 described symptoms of chest pain or mentioned angina, often associated with emergency care at a hospital. There were 99 cases that described the condition as hypertension or "heart and hypertension" (the usual legal term for heart or hypertension cases that are covered for police and fire fighters). An additional 40 were other heart-related conditions, predominately testing abnormalities on ekg or unusual symptoms involving the heart or chest.

Though not generally well described, causes of the heart cases included multiple cases attributed to stress, walking/running, exertion, violent situations, and heat. Two-thirds of the cases (65%) involved police or firefighters or other municipal employees who are frequently covered under heart and hypertension laws that consider those conditions to be work-related for workers' compensation purposes.

Mental Stress

There were a total of 113 stress-related claims in the database in 2009, an increase of 13% over 2008.

There were 15 cases which cited reactions to violence, robbery, or trauma (such as witnessing or being in auto accidents), 11 cases were attributed to harassment or hostile work environments, 9 cases that were attributed to conflicts with supervisors or promotions, and 6 attributed to conflicts with clients (Table D-13). There were 20 claims related to excessive job demands or aspects of job duties. There were 3 cases that were due to job insecurity. There were 49 that were simply defined as "stress" without further explanation. There were also several stress-related cases that are classified under heart conditions (See Table D-12, above).

Specific examples of situations causing stress include robberies with guns (including one put on employee's head and another with a pregnant employee threatened with a gun), verbal abuse from students on a school bus, physical assault by a student, a guest propositioning an employee for "making extra money", a co-worker threatening to get employee fired, being screamed at by a CEO, job insecurity due to declining sales numbers, being in an auto accident where another person died, witnessing a serious motorcycle accident,

Table D-13: Stress Conditions by Source, WCC, 2008 - 2009

Sources of Stress Conditions	2008	2009	%	Change
Job duties/demands	2	20	18%	900%
Violence/robbery/trauma	26	15	13%	-42%
Harassment/hostile environment	7	11	10%	57%
Supervisor/co-worker	7	9	8%	29%
Client	3	6	5%	100%
Job insecurity		3	3%	
Unknown/other	55	49	43%	-11%
Total	**100**	**113**	**100%**	**13%**

Other Occupational Diseases

Hearing Loss

There were 190 reports of hearing loss in 2009 (Table D-14), essentially the same as in 2008. Of these cases, 16 appeared to be caused by acute (single incident) noises or injuries. The rest appeared due to long-term exposure to noise, or were noted as being found on routine audiograms. Most cases were from manufacturing, in particular transportation equipment manufacturing (118 cases), and also firefighting (26 cases),.

Table D-14: Other Occupational Illnesses, WCC, 2008 - 2009

Type of illness	2008	2009	%	Change
Hearing loss	191	190	43%	-1%
Dizziness/passing out	99	103	24%	4%
Cold/heat related conditions	65	75	17%	15%
Seizure	16	34	8%	113%
Other conditions	28	21	5%	-25%
Allergic	17	11	3%	-35%
Cancer	5	3	1%	-40%
Radon exposure	37		0%	-100%
Total	**458**	**437**	**100%**	**-5%**

Other Disease Conditions

There were 75 reports of temperature-related problems from heat or cold, a 17% increase from 2008. There were 137 reports of workers becoming dizzy, fainting, or similar conditions such as seizures; some of these are likely from pre-existing conditions that occurred while at work.

There were 11 cases of allergic reactions reported in addition to those noted above under lung and skin conditions. There were 3 cases of cancer reported (in addition to those under lung conditions above), including a bladder cancer, lymphoma, and liver cancer. There were 21 “other” conditions that were difficult to classify due to incomplete information.

E. Occupational Disease Surveillance System: 2008 Physicians' Reports

Physicians are required to report known and suspected occupational disease to the Occupational Illnesses and Injury Surveillance System (OIISS) that is maintained by the Department of Public Health. Although all physicians are required to report, most reports are received from Connecticut's occupational health clinics and industrial medicine programs. Data for 2009 was not available for this report (with the exception of lead data) so this section will review information from 2008 physician reports.

There were 1,368 occupational illness reports received from physicians for 2008 (Table E-1). MSD (Musculoskeletal Disorders) dominated with 60% of reports, followed by skin diseases (22%), lung conditions and poisonings (10%), and 5% were "other" conditions; (note that bloodborne diseases are mostly not captured in the OIISS system so it is a very small category. In addition, there were 364 laboratory reports of blood lead levels in adults of 10 ug/dl or more in 2008 (309 in 2009), giving a total of 1,732 occupational illnesses reported by physicians and laboratories combined in 2008.

Table E-1: Occupational Disease by Type, OIISS, 1998 - 2009

													% change 07-08
Category	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009***	
MSD	754	823	1174	841	921	624	488	511	751	838	827		-1%
Skin	237	295	339	274	338	181	194	241	256	273	302		11%
Lung	206	139	291	190	283	156	173	191	154	59	142		141%
Other	31	31	74	56	30	20	36	70	69	58	31		-47%
Infectious**	13	22	27	68	34	21	33	30	50	20	66		230%
Sub-total OIISS	**1,241**	**1,310**	**1,905**	**1,429**	**1,606**	**1,002**	**924**	**1,043**	**1,280**	**1,248**	**1,368**		**10%**
Lead (Lab)	203	212	616**	530**	476**	400**	342	463	465	363	364	309	0%
Total	**1,444**	**1,522**	**2,521**	**1,959**	**2,082**	**1,402**	**1,266**	**1,506**	**1,745**	**1,611**	**1,732**		**8%**

*Data from 2009 OIISS physician reporting system was not available.
**Infectious does not include most bloodborne pathogen exposures.

Over the previous 10 years, reported illnesses declined between 2000 and 2004, then increased between 2005-2008.

In 2008, 109 physicians from 16 clinics (at 22 locations) reported at least one case into the OIISS. Four clinic networks reported 100 or more cases, and contributed 58% of the cases. Twenty-three of the physicians reported 20 or more cases, and accounted for 70% of the reports. Although it is a state law that known and suspected occupational diseases diagnosed by any physician in the state must be reported to CT Departments of Labor and Public Health, (CGS § 31-40a), the primary reporters are the occupational health clinics and auxiliary occupational health clinics. Therefore, these reports should be viewed as just a small portion of physician-diagnosed occupational diseases in Connecticut.

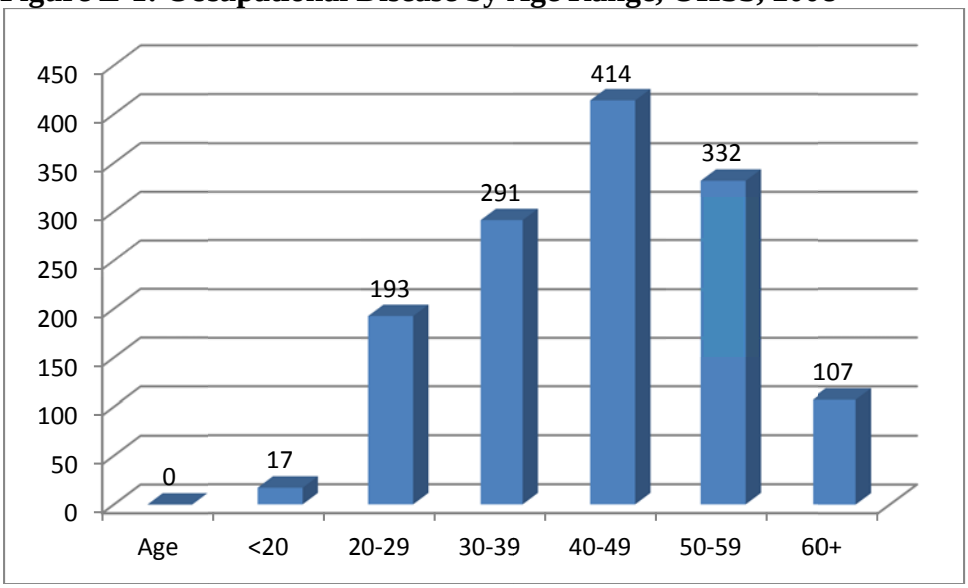
Physicians only reported whether exposures causing the condition were continuing for approximately 21% of the reports; of these, 124 (42%) of cases were known to have continuing exposure. In 19% of the cases it was reported that other workers were likely to be exposed to the same hazard (where this was known). Sixty-seven

percent (67%) of the cases were classed as "high certainty" for being an occupationally-related disease, 28% were "moderate certainty," and 5% "low certainty."

Of the 878 reports where race was known, 156 (18%) were identified as Black, and 165 (13%) of 1232 cases (where ethnicity was known) were identified as Hispanic.

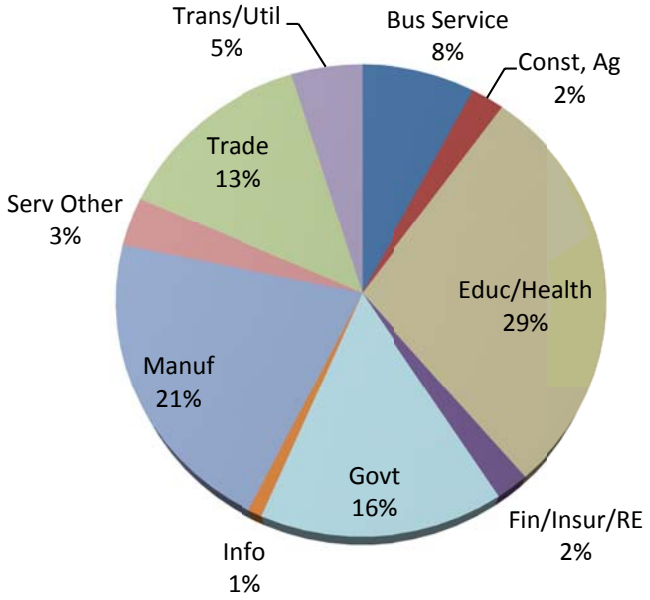
The largest number of cases were in the age range of 40-49 years old (31% of all cases), followed by those in their 50's (25%), 30's (21%), and 20's (14%; Figure E-1). Only 17 cases were reported in workers less than 20 years of age.

Figure E-1: Occupational Disease by Age Range, OIISS, 2008



Education and health sector reported the most cases (29%), followed by manufacturing (21%), government (16%), and trade (13%). Education and health includes some government workers' illnesses. (Figure E-2 and Table E-2).

Figure E-2: Occupational Disease by Industry Sector, OIISS, 2008



However, industry distribution was somewhat different by condition (Table E-2). MSD's were primarily from Education and health (227), manufacturing (208), and trade (129). Dermatitis (skin disorders) were primarily from education and health (79) and government (75). Lung cases were primarily from education and health (34) and government (20).

Table E-2: Type of Illness by Industry Sector (NAICS), 2008

Sector	Infectious	Lung	MSD	Other	Skin	Total
Education/health	23	34	227	22	79	385
Manufacturing	0	11	208	13	48	280
Government	2	20	88	24	75	209
Trade	1	18	129	16	18	182
Business service	3	6	48	9	38	104
Transport/utilities	0	4	43	6	11	64
Services: other	1	5	27	1	11	45
Construction, agriculture	0	2	18	0	10	30
Finance/insurance/real estate	0	5	15	2	6	28
Information	0	0	10	1	1	12
Unknown	1	5	12	1	5	24
Total	**31**	**110**	**825**	**95**	**302**	**1,363**

Musculoskeletal Disorders (MSDs)

There were a total of 827 Musculoskeletal Disorders (MSDs) in 2008, an increase of 10% over 2007 (Table E-3). This table only includes upper-extremity MSDs (does not include MSDs caused by acute incidents such as falls or individual lifts), and excludes lower back diagnoses, even if caused by cumulative strain. The most common specific diagnoses for musculoskeletal disorders were epicondylitis (tennis elbow) with 22% of the cases, tendonitis (21%), Carpal Tunnel Syndrome (16%), and Tenosynovitis with 10% (Table E-3; also see descriptions of conditions below).

Table E-3: Musculoskeletal Disorders by Type, OIISS, 2007 - 2008

Illness	2007	2008	Percent	Change
Epicondylitis	188	182	22%	-3%
Tendonitis	187	171	21%	-9%
Carpal Tunnel Syndrome (CTS)	144	131	16%	-9%
Tenosynovitis	39	82	10%	110%
DeQuervains	51	39	5%	-24%
Bursitis/arthritis	52	35	4%	-33%
Ganglion	25	37	4%	48%
Trigger finger	16	10	1%	-38%
Strain/Sprain	21	68	8%	224%
Numbness/nerve	2	18	2%	800%
Plantar fasciitis	0	11	1%	
Other MSD	26	43	5%	65%
Total	**751**	**827**	**100%**	**10%**

Musculoskeletal disorders (also referred to as cumulative trauma disorders or repetitive strain injuries) include tendon-related conditions, nerve problems, circulatory, as well as combined conditions. Specific descriptions of these disorders include:

Tendon Disorders

- Tendonitis: swelling of the tendons
- Epicondylitis: tendon irritation in the elbow area, including "golfer's elbow" and "tennis elbow"
- Rotator Cuff Syndrome: tendonitis in the shoulder area
- Tenosynovitis: inflammation of the tendon sheaths, lubricated covers that surround the tendons, particularly in the hand
- De Quervain's Syndrome: tendon sheath disorder of side of wrist and base of thumb
- Trigger Finger: a bump on the tendon that catches on the tendon sheath that makes the finger or thumb difficult to move
- Ganglion Cysts: swelling of the tendon sheaths from excess lubricating fluid
- Bursitis: inflammation of the fluid-filled sacs around ligaments and tendons

Nerve Disorders

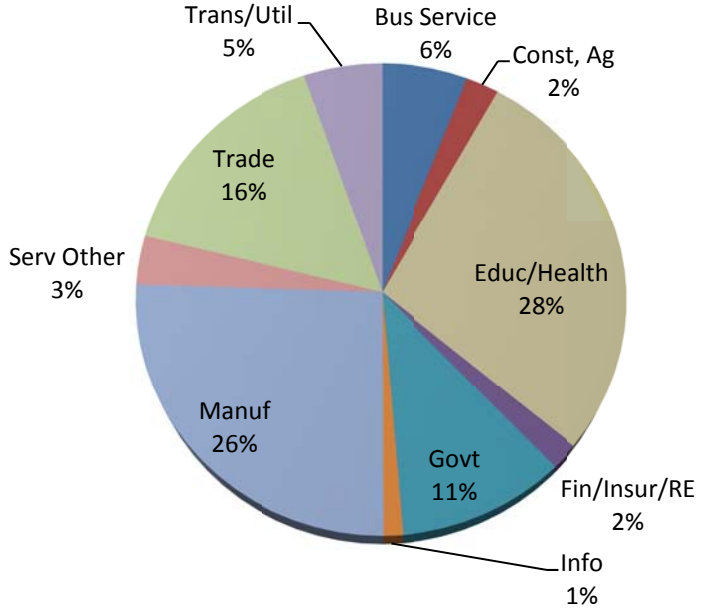
- Carpal Tunnel Syndrome: pinching of the median nerve in the wrist, usually by swollen tendons that pass through the carpal tunnel (the median nerve can also be pinched in the elbow, shoulder, or neck areas)

Circulatory/Combined/Other

- Thoracic Outlet Syndrome: pinching of the nerves and blood vessels in the neck/ shoulder area

The largest number of MSDs was from education and health (28%), followed by manufacturing (26%), trade (16%) and government (11%). Public education is included under education and health (Figure E-3).

Figure E-3: Musculoskeletal Disorders by Industry Sector, OIISS, 2008



Causes for MSDs are difficult to classify since they are frequently described differently by the various people recording the case, and were not available for most cases. The most common specific cause noted for MSDs (Table E-4) was lifting (77 cases), computer use and data entry (56), pushing or pulling (29), tools and vibration (13) and machines (9). The generic category of "repetitive motion" accounted for 90 reports.

Table E-4: Common causes of MSD, OIISS, 2008

Cause	Cases
Repetitive	90
Lifting	77
Computer/clerical	56
Push/pull	29
Tools and vibration	13
Machine	9
Cleaning	5

Skin Conditions

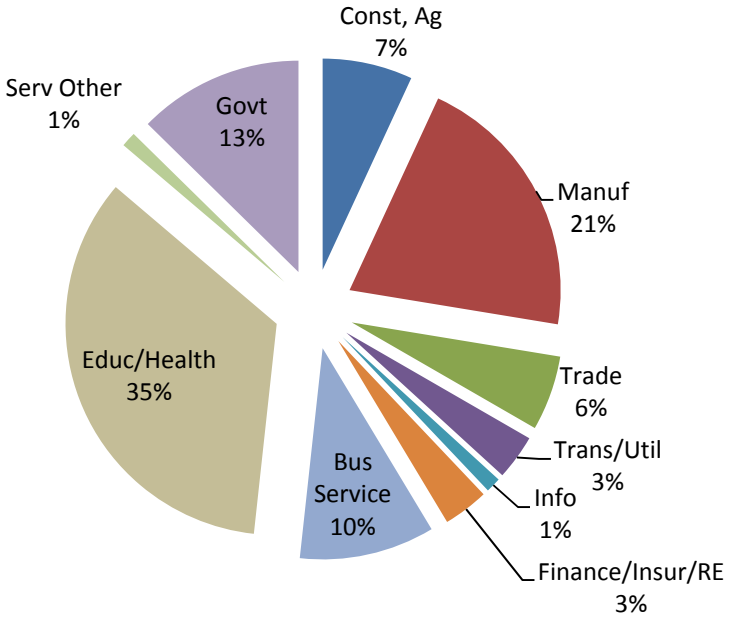
There were 302 skin disorder reports for 2008 (Table E-5), an 11% increase over 2007. The largest category was contact dermatitis (38% of cases), then poison ivy or other plant exposures (33% of all cases), specified chemical dermatitis (21%), and other skin conditions (9%). Causes included poison ivy, gloves and latex (14 cases), solvents, diesel, bleach (2), coolant, propane, germicidal wipes, hand sanitizer, foam earplugs, spray cleaner, soap, acrylic acid, dirty drain water, ceiling tiles, fiberglass, and a respirator.

Table E-5: Skin Conditions by Type, OIISS, 2007 - 2008

Illness	2007	2008	Percent (2008)	% Change 2007-08
Contact dermatitis	84	114	38%	36%
Poison ivy & other plants	85	100	33%	18%
Chemical dermatitis	54	62	21%	15%
Other skin conditions	50	26	9%	-48%
Total	**273**	**302**	**100%**	**11%**

Skin conditions (Figure E-4) occurred most commonly in the Education and Health industry sector (35%), followed by manufacturing (21%) state and local government sector (13%) and Business Services (10%).

Figure E-4: Skin Conditions by Industry Sector, OIISS, 2008



Lung/Respiratory Diseases and Poisonings

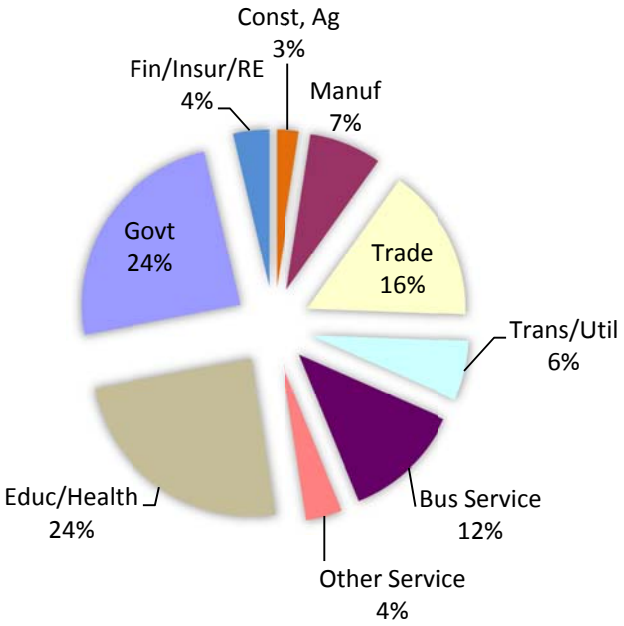
There were 141 cases of lung disease and poisonings reported in 2008 (Table E-6), an increase of 139% from the 59 reported in 2007. Non-specific respiratory illnesses were the most common type of condition, with 34% of reports, followed by asthma and reactive airway dysfunction syndrome (RADS) at 22%, upper respiratory conditions such as rhinitis and sinusitis (14%) and bronchitis (4%). Asthma conditions were caused by bleach, latex, ammonia, cleaners, coolant, dust from a vacuum cleaner, indoor air quality or mold (12 cases), and medication. Other lung conditions were caused by bleach, indoor air quality or mold (20 cases), perfume and lotions (2), flour, floor wax, anhydrous ammonia, chloroform, cleaning chemicals, smoke (9), rugs, and menthol.

There were 32 poisonings reported in 2008; poisonings were caused by pool chemicals, a pesticide, bleach (2), carbon monoxide (7), lead, and biocides (2).

Table E-6: Lung Diseases and Poisoning by Type, OIISS, 2007-2008

Illness	2007	2008	Percent	% Change 2007-8
Respiratory	28	48	34%	71%
Asthma/RADS	12	31	22%	158%
Rhinitis/sinusitis	3	20	14%	567%
Poisoning	0	32	23%	
Bronchitis	3	6	4%	100%
Other lung	13	4	3%	-69%
Total	**59**	**141**	**100%**	**139%**

Figure E-5: Lung Disease and Poisonings by Industry, OIISS, 2008



Lung disease and poisoning cases mainly occurred in education and health (24%) and government (24%), followed by trade (16%), and business service (12%); Figure E-5).

Lead Poisoning (Laboratory Reports)

Connecticut requires laboratories to report all blood lead tests of 10 micrograms per deciliter (ug/dl) of whole blood or greater to the Connecticut Department of Public Health (CGS § 19a-110). These cases are classified into childhood (less than 16 years of age) and adult cases (only the latter are reported here), with the majority of adult cases being attributed to an individual's occupation (although some cases occur in individuals engaged in hobbies such as home improvement or target shooting). The numbers are based on the highest level measured for each individual during the calendar year; they do not include multiple tests on the same individual. OSHA medical removal protections apply at the level of 50 micrograms per deciliter of whole blood or above (40 micrograms per deciliter to return to work), although lead can have neurological and other negative effects on health at much lower levels of exposure.

Blood lead data was also available for 2009 as well as 2008, so data is presented for the last three years for comparison purposes. The total number of lead poisoning reports in 2009 (309 cases) declined 15% from 2008 (364 cases). The lowest level (10-24 ug/dl) of recorded elevated lead levels accounted for 80% of all cases (Table E-7) and decreased by 22%. However, there was an increase in all of the other higher categories, including a 15% increase in the 25-39 range. Almost all of the reported lead poisoning cases occurred in men; there were only 25 reports among women.

Table E-7: Lead Cases by Level of Blood Lead, Adult Blood Lead Epidemiology and Surveillance (CT ABLES program), 2007-2009

Blood lead level*	2007	2008	2009	Percent	Change(years)
10-24	291	318	248	80%	-22%
25-39	59	39	45	15%	15%
40-49	5	3	9	3%	200%
50-59	4	3	4	1%	33%
>=60*	4	1	3	1%	200%
Total	**363**	**364**	**309**	**100%**	**-15%**

***micrograms/deciliter (ug/dl) of whole blood**

Infectious and Other Diseases

Since 1998, most bloodborne disease exposures such as needlesticks have not been reported into the OIISS, so this report under-counts infectious disease potential exposures. There were 27 reports of infectious diseases, including 13 needlestick cases that were reported to OIISS, 4 cases of TB disease/conversion, 3 cases of Lyme Disease, and 7 other cases (including ringworm and scabies) in the 2008 database (Table E-8).

In addition to the infectious diseases, there were 66 other occupational illnesses reported by physicians (Table E-8). This included 19 cases of hearing loss, 13 allergic reactions, and 20 cases of headache, dizziness, or similar symptoms.

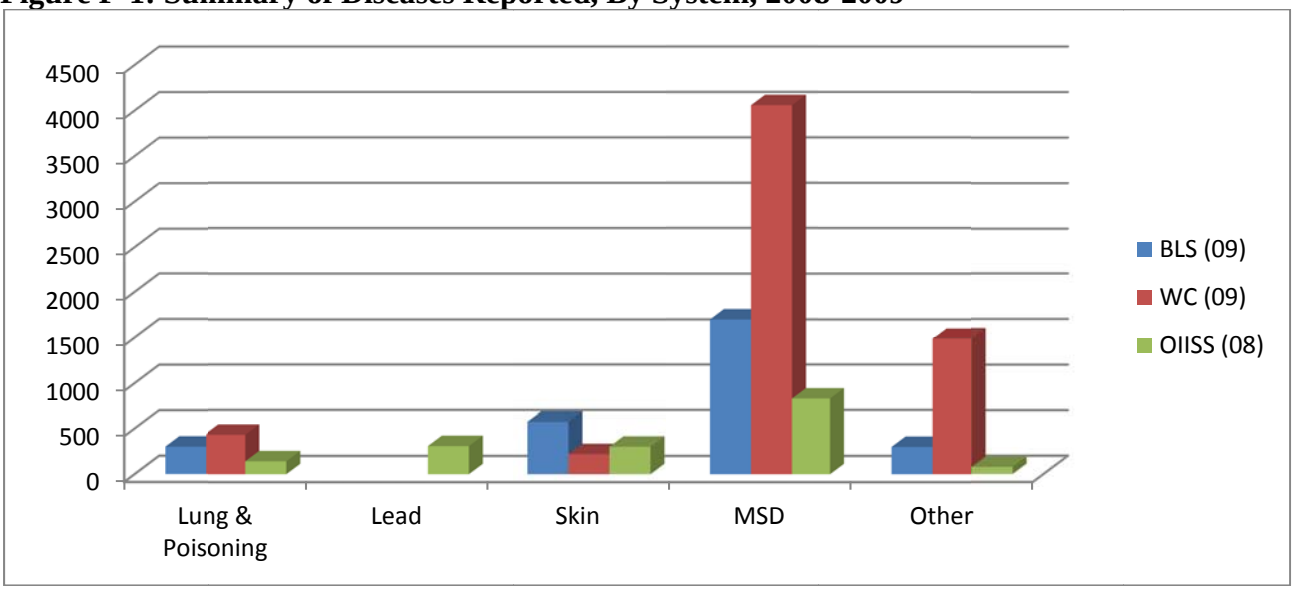
Table E-8: Infectious and Other Illnesses, 2008

Illness	2008
Infectious	
Lyme disease/tick	3
Needlestick	13
Ringworm/scabies/etc	7
TB	4
Infectious subtotal	**27**
Other Illnesses	
Hearing loss	19
Allergy	13
Headache	11
Dizzy/light headed/syncope	9
Mental disorder	5
Heat exhaustion	4
Other	5
Other illnesses subtotal	**66**

F. Summary of Diseases

Figure F-1 shows the totals by disease category for 2009 (2008 for the OIISS) for three reporting systems: the Bureau of Labor Statistics/Conn-OSHA (BLS); Workers' Compensation (WCC); and the Occupational Illnesses and Injury Surveillance System (OIISS, physician reports). Categories have been combined to make comparisons as close as possible; however, differences in the three systems' definitions make comparisons incomplete. For example, Workers' Compensation only requires reporting for lost-time or restricted duty cases, while the other two reporting systems require all occupational illnesses to be reported. According to the Department of Public Health, although all physicians are legally required to report occupational disease, only a small minority do report. Lead reports from the laboratory reporting system are presented separately, since there are very few lead reports in any of the other systems. The BLS/Conn-OSHA system has discontinued collecting "repetitive trauma" as a category beginning in 2002, so MSD has been estimated based on the proportion of "other illness" in the 2001 dataset, which was 85%. Appendix 1 details differences in the data systems.

Figure F-1: Summary of Diseases Reported, By System, 2008-2009

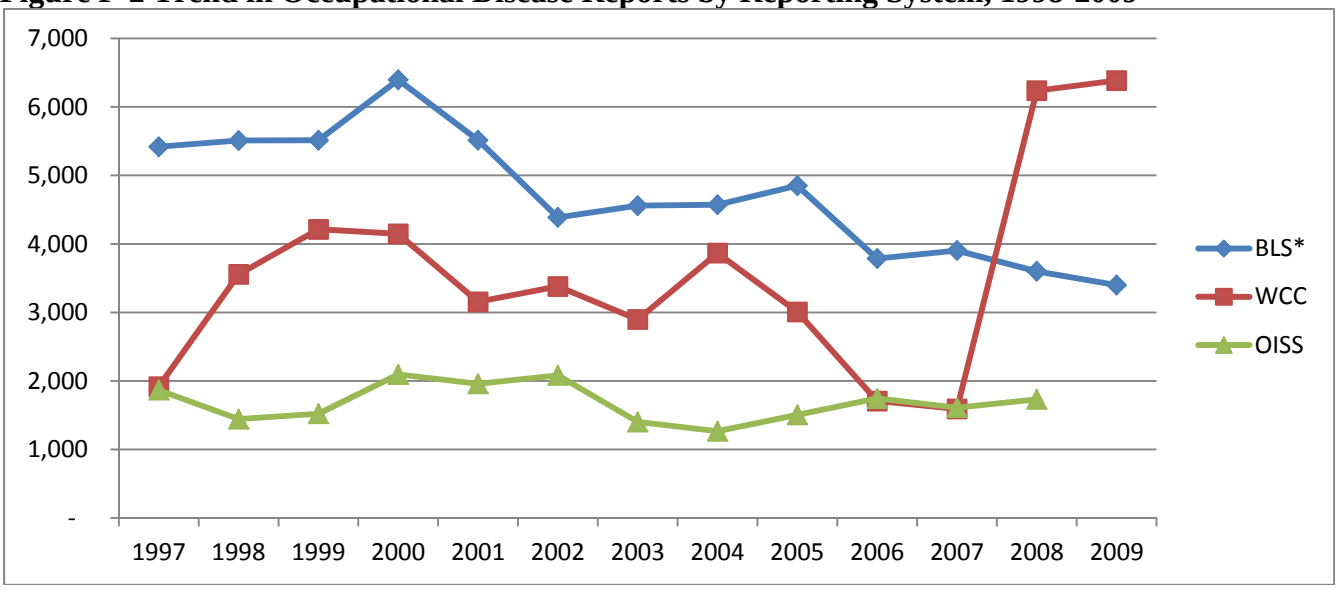


Notes: BLS=Bureau of Labor Statistics/ConnOSHA survey; WC=Workers' Compensation First Report of Injury Database; OIISS= Physicians reports from the Occupational Illnesses and Injury Surveillance System.
MSD for the BLS database was estimated using prior proportions from "other" (85%).

The Workers' Compensation database showed the highest number of cases, with 6,385 cases reported, followed BLS with 3,400, and the Physicians' reporting database (which was not available for 2009, so 2008 data is presented) with 1,732 cases. Previous research has shown that there is a fairly low amount of overlap between these systems, so total cases are higher than these figures might indicate.

Overall, BLS reports in 2009 decreased 6% from 2008 while Workers' Compensation reports increased 2%. Longer term trends in number of reports are complex, with: BLS trends generally declining; Workers' Compensation data showing an early increase, and then a dramatic increase in 2008 and 2009 (the Workers' Compensation database appears incomplete in 2003 and 2005-2007); and physician reports remaining fairly stable.

Figure F-2 Trend in Occupational Disease Reports by Reporting System, 1998-2009



Notes: BLS= Bureau of Labor Statistics/Conn-OSHA survey; WCC= Workers' Compensation First Report of Injury; OIISS= Occupational Illness and Injury Surveillance System (physician reports).
*Note: BLS figures in 2002 not comparable to prior years due to changes in data collection. WCC data may not be complete for 2003, 2005-2007. OIISS was not complete for 2008.

G. Appendix 1: Databases and Methods

Determining the incidence of occupational illness in Connecticut is difficult. The problem is two-fold: 1) occupationally-related illness is not consistently recognized as work-related; and, 2) the cases reported to either the Department of Labor and/or the occupational health surveillance division of the Department of Public Health are not complete. Consequently, this assessment of occupational disease reviews a number of sources of information: the Workers' Compensation Commission's First Report of Injury database, the Bureau of Labor Statistics/Connecticut Occupational Safety and Health Administration Survey of Occupational Injuries and Illnesses, the Occupational Illnesses and Injury Surveillance System, and the Connecticut Adult Blood Level Epidemiology Surveillance Program. The Workers' Compensation database was provided in electronic form from the CT Workers' Compensation Commission and the physicians' report from the CT Department of Public Health. The BLS/Conn-OSHA survey data was provided in table form from the Connecticut Department of Labor.

Assumptions and Conventions

The Workers' Compensation Commission's First Reports of Injury database and the Occupational Illnesses and Injury Surveillance System (OIISS, referred to as Physicians' Reports) were reviewed in depth. A rationale for the data review was developed to differentiate occupational illnesses from injuries and to classify the workplace reports by nature and cause of the illness. Each entry was reviewed for internal consistency and reasonableness. Specifically, the process employed the following steps:

1) **Clear acute injuries were eliminated** (approximately 90% of the Workers' Compensation database, and 30% of the Physicians Reports). In assessing the Workers' Compensation First Reports of Injury, a line by line review of injury descriptions, nature descriptions and codes, listed causes, and part of body were used to determine whether an injury or illness was described. The determination relied most heavily on the injury description and then on the other data fields in the order listed above.

The Physicians' Reports are organized differently. Numerical "Nature of Injury or Illness" codes from the Bureau of Labor Statistics Occupational Injury and Illness Classification System (ANSI Z16.2-1995, American National Standard for Information Management for Occupational Safety and Health) were used as the primary indicator to evaluate the records. Cause, certainty, diagnosis, ICD codes, suspected agent and symptom fields were also reviewed in determining illness or injury. Categories that were eliminated included all burns, eye problems such as conjunctivitis or chemical exposures, lower back problems (including sciatica), hernias, infected wounds or burns, insect and animal bites (with the exception of tick bites because of the relationship with Lyme Disease), and electrical shocks.

2) **Validity of remaining records was determined.** Records were reviewed to be sure that the coding of types of disease was consistent with other information in the record. In addition, diseases were categorized by type of disease. References used include Occupational Health, Recognizing and Preventing Work-Related Disease, Fourth Edition; Levy, Barry S. and Wegman, David H.; Little, Brown and Company; 2000 and Chemical Hazards of the Workplace; Proctor, Nick H. and Hughes, James P.; J.P. Lippincott Company; 1978. Physicians at the University of Connecticut Health Center's Division of Occupational Medicine reviewed specific data records where there were questions about diagnoses.

3) **Fields were either revised or added to the databases**: *Illness Type* and *Nature of Illness*. The *Nature of Illness* was based on the information in the databases, research, and general information

about the illnesses. Then each entry was categorized by *Illness Type*. The specific nature categories were grouped into broader categories to support graphic representation. For the Workers' Compensation database, the description of injury was used as the key description of the illness if it disagreed with the coding for other variables.

4) **Employers were coded for industry** utilizing a comprehensive list of Connecticut employers from the CT Department of Labor. Prior to 2003, this coding utilized the SIC (Standard Industry Classification), but beginning in 2003 this was changed to the NAICS (North American Industry Classification System) for the BLS and workers' compensation data in response to the national change to that system for BLS data. Rates were calculated using employment figures from the Occupational Safety and Health Statistics Division of the CT Labor Dept.

5) **Data was cleaned, tabulated and put into presentation form** using SPSS for Windows, Microsoft Access, Excel, and Word software.

6) **The report is reviewed** by the Connecticut Workers' Compensation Commission prior to publication.

H. Appendix 2: Occupational Disease Detail by Type and Year

Table H-1: Cases of Occupational Disease, by Type, Bureau of Labor Statistics/Conn-OSHA, 1979 - 2009

	Employ.*	All Ill	Skin	MSD	Lung-dust	Respir.	Poison	Physical	Other
1979	1,358	3,322	1,716	471	25	317	175	250	368
1980	1,394	3,066	1,586	513	88	214	66	199	400
1981	1,409	3,214	1,509	701	38	290	89	192	395
1982	1,400	2,549	1,130	580	31	223	31	216	323
1983	1,419	2,930	1,236	665	20	154	152	176	519
1984	1,490	2,735	1,109	665	24	273	65	162	432
1985	1,528	2,809	928	727	44	233	51	130	693
1986	1,567	2,719	808	761	39	274	65	235	538
1987	1,607	4,643	1,352	1,430	31	300	62	704	754
1988	1,637	4,364	1,257	405	35	332	56	405	733
1989	1,634	5,844	1,248	2,629	57	277	74	468	1,087
1990	1,593	5,307	1,032	2,535	93	457	54	496	641
1991	1,518	6,094	946	3,454	62	422	113	501	591
1992	1,483	6,458	1,084	3,852	37	471	53	349	612
1993	1,487	8369	965	5526	52	512	166	346	802
1994	1,502	7,319	957	4,482	74	410	97	313	986
1995	1,520	6,787	884	4,220	80	323	35	349	896
1996	1,538	6,021	827	3,711	40	418	34	235	756
1997	1,570	5,419	620	3,335	21	287	70	150	936
1998	1,597	5,510	989	3,398	10	459	45	92	517
1999	1,630	5,513	793	3,306	20	386	71	265	671
2000	1,653	6,396	897	3,827	65	438	29	137	1,003
2001	1,572	5,514	916	3,220	10	630	29	118	591
	Employ.*	**All Ill**	**Skin**			**Respir.**	**Poison**		**Other**
2002	1,602	4,387	831			320	78		3,159
2003	1,605	4,559	903			490	32		3,132
	Employ.*	**All Ill**	**Skin**			**Respir.**	**Poison**	**Hearing**	**Other**
2004	1,603	4,572	832			354	35	466	2,886
2005	1,614	4,850	848			480	8	381	3,134
2006	1,636	3,787	575			235	38	439	2,500
2007	1,667	3,904	624			358	22	457	2,443
2008	1,675	3562	690			293	130	360	2088
2009	1,629	3,400	600			300	--	500	2000

Source: BLS/Conn-OSHA. Data collection methods and categories changed in 2002, and are not comparable to prior years. Employment in thousands. Since this data is based on a weighted survey, some of these numbers (particularly the smaller numbers) are not reliable.

Table H-2: Rate per 10,000 Workers of Occupational Disease, by Type, Bureau of Labor Statistics/Conn-OSHA, 1979-2009

Year	Employed	Skin	MSD	Resp/ Lung	Poisoning	Other	Hearing	Total
1979	1,358,000	12.6	3.5	2.5	1.3	8.2		24.5
1980	1,394,000	11.4	3.7	2.2	0.5	8.6		22
1981	1,409,000	10.7	5	2.3	0.6	9.4		22.8
1982	1,400,000	8.1	4.1	1.8	0.2	8.2		18.2
1983	1,419,000	8.7	4.7	1.2	1.1	9.7		20.6
1984	1,490,000	7.4	4.5	2	0.4	8.6		18.4
1985	1,528,000	6.1	4.8	1.8	0.3	10.4		18.4
1986	1,567,000	5.2	4.9	2	0.4	10		17.4
1987	1,607,000	8.4	8.9	2.1	0.4	18.2		28.9
1988	1,637,000	7.7	2.5	2.2	0.3	9.6		26.7
1989	1,634,000	7.6	16.1	2	0.5	26		35.8
1990	1,593,000	6.5	15.9	3.5	0.3	23.6		33.3
1991	1,518,000	6.2	22.8	3.2	0.7	30.4		40.1
1992	1,483,000	7.3	26	3.4	0.4	32.7		43.5
1993	1,487,000	6.5	37.2	3.8	1.1	45.2		56.3
1994	1,501,800	6.4	29.8	3.2	0.6	39		48.7
1995	1,520,000	5.8	27.8	2.7	0.2	36.5		44.7
1996	1,538,000	5.4	24.1	3	0.2	30.8		39.1
1997	1,570,500	3.9	21.2	2	0.4	28.3		34.5
1998	1,596,900	6.2	21.3	2.9	0.3	25.2		34.5
1999	1,630,100	4.9	20.3	2.5	0.4	26.1		33.8
2000	1,653,000	5.4	23.2	3	0.2	30.4		38.7
2001	1,571,000	5.8	20.5	4.1	0.2	25.1		35.1
Year	Employ	Skin		Respir	Poison	Other	Hearing	Total
2002*	1,602,000	6.2	*	2.4	0.6	23.7		32.9
2003	1,605,000	6.9	*	3.8	0.2	24		34.9
2004	1,603,100	6.4	*	2.7	0.3	22.1	3.6	34.9
2005	1,614,100	6.3	*	3.6		23.3	2.8	36
2006	1,635,700	4.3	*	1.8	0.3	18.8	3.3	28.4
2007	1,666,600	4.7		2.7	0.2	18.2	3.4	29.2
2008	1,675,000	5.1		2.2	1	15.4	2.7	26.3
2009	1,629,300	4.7		2.3		15	3.5	25.6

Source: BLS/Conn-OSHA

*Data collection methods and categories changed in 2002, and are not comparable to prior years.

"Other" includes the pre-2002 categories of MSD, Physical, Lung-dust, and Other.

I. Appendix 3: Internet Resources for Job Safety and Health

Compiled by Tim Morse, Ph.D., at the ErgoCenter at the University of Connecticut Health Center, tmorse@uchc.edu, 860-679-4720. Please send suggestions for additions.

General Health and Safety Sites

One of the best sources of information for job health and safety on the internet is the **OSHA** (**Occupational Safety and Health Administration**) homepage, which includes an ergonomics homepage, a searchable index of standards, and a listing of health and safety sites on the internet. http://www.osha.gov

To look up **OSHA citations** by company or industry: http://www.osha.gov/pls/imis/establishment.html

NIOSH (the National Institute for Occupational Safety and Health) is another good general source. http://www.cdc.gov/niosh/homepage.html

EPA (Environmental Protection Agency**)** has a number of sites relevant to occupational health on indoor air quality, asbestos, and other topics. www.epa.gov http://www.epa.gov/iaq/

The **North Carolina Occupational Safety and Health Education and Research Center** is the new home for the occupational health listserve (formerly based at Duke), with a good set of technical links to other occupational health resources.
http://www.occhealthnews.net

The **Canadian Centre for Occupational Health and Safety** has hundreds of resources on their health and safety internet resource list. Start at their home page, then choose Resources (on the top bar), then Internet Directory. http://www.ccohs.ca

New Jersey Health Dept. has 1,600 excellent **chemical hazard factsheets** that are free, independently researched, and clearly written (650 in Spanish) on hundreds of substances.
http://web.doh.state.nj.us/rtkhsfs/indexfs.aspx

Vermont safety information resources has a database of **material safety data sheets (MSDS)** from a large number of chemical companies. http://www.siri.org

Several safety organizations have useful websites:

www.nsc.org	The National Safety Council
www.aiha.org	The American Industrial Hygiene Association
www.asse.org	American Society of Safety Engineers
www.nfpa.org	National Fire Protection Association
www.safetycentral.org	International Safety Equipment Association

For a labor perspective, the **national AFL-CIO** includes a health and safety page. www.aflcio.org/issues/safety, and **NYCOSH** (New York Council for Occupational Safety and Health) covers a lot of news and has a listserve.http://www.nycosh.org

The **Connecticut Business and Industry Association** has a health and safety page that helps businesses understand what OSHA laws apply to them, and provides information on upcoming conferences and events.
http://www.cbia.com/hr/SafetyAndHealth

The **Environmental Defense Fund** has a scorecard page with information about the health effects of chemical emissions from 17,000 industrial facilities and the testing of chemicals, with maps and interactive databases.
http://www.scorecard.org/

The Cal-OSHA Reporter carries current stories on job health and safety at http://www.cal-osha.com.

There are at least a couple of **blogs that carry job health and safety news and commentary.** These include http://weeklytoll.blogspot.com which includes a listing of those who have been killed on the job in the past week, the Pump Handle at http://scienceblogs.com/thepumphandle/ which continues the legacy of Jordan Barab's blog, and http://workerscompinsider.com which covers workers' compensation issues.

The **Toxic Use Reduction Institute** at UMass Lowell has extensive resources on safer alternatives to toxic substances, including a database on alternatives to solvents at http://www.turi.org. **UMass-Lowell's Center for Sustainable Production** has information on changing chemical policies at http://www.sustainableproduction.org/. The **Health and Safety Executive of Great Britain** has extensive information on the new European Union's REACH (Registration, Evaluation, and Authorization of Chemicals) at http://www.hse.gov.uk/reach/index.htm.

State of Connecticut Resources

The **Connecticut Workers' Compensation Commission** has an excellent website, including information on the locations of offices, a searchable version of the workers' compensation statutes, new decisions, and other information. http://wcc.state.ct.us

The **ConneCT** website allows access to all state agencies: http://www.state.ct.us

The **State Department of Public Health** includes a site for the occupational health program, including versions of the occupational lung disease newsletter, factsheets. http://www.ct.gov/dph/occupationalhealth

The **Connecticut Labor Department** includes an occupational health services site, which includes information on their free consultation program and a great set of links to other health and safety sites. http://www.ctdol.state.ct.us/osha/osha.htm

The Connecticut General Assembly website lets you search for any bill being considered, or get information about relevant committees such as Labor and Public Employees or Public Health. http://www.cga.ct.gov You can track national bills on the National Library of Congress site known as Thomas http://thomas.loc.gov

You can search the medical literature at PubMed at www.pubmed.gov or more general academic searches http://scholar.google.com/schhp?tab=ws through Google Scholar

UConn Health Center's Occupational and Environmental Health Center has information and links on job health and safety http://www.oehc.uchc.edu and has a center on Healthy Workplaces with UMass Lowell at http://www.oehc.uchc.edu/healthywork. In addition the Center for Indoor Environments and Health http://www.oehc.uchc.edu/CIEH.asp provides guidance on environmental concerns in schools in office buildings.

Ergonomic Sites and Links

ErgoCenter at UConn Health Center at http://www.oehc.uchc.edu/ergo.asp

Ergoweb has a lot of good factsheets, documents, and news. http://www.ergoweb.com

Tom Bernard's website at **University of South Florida** has many of the standards and excellent free electronic ergonomic analysis tools such as the NIOSH lifting equation at http://personal.health.usf.edu/tbernard/ergotools/index.html. **Tom Armstrong** at the **University of Michigan** runs one of the most respected university training programs for ergonomics, and at http://www-personal.umich.edu/~tja has extensive information, tools, and lectures. **Cornell University's Alan Hedge** has an active ergonomics program, with reports posted on graduate student projects and evaluation of ergonomic products at http://ergo.human.cornell.edu. **The University of Virginia** has ergonomics training and resources at http://ehs.virginia.edu/ehs/ehs.ergo/ergo.html.

A download of an interesting ergonomics software program developed by Battelle Labs for the Dept. of Energy called **ErgoEaser** is available for free. The program lets you input measurements of workstations and operators to help analyze computer workstations and lifting. http://hss.energy.gov/ergoeaser/download.html

Human Factors and Ergonomics Society is the main professional association in ergonomics. http://www.hfes.org

CTD News Monthly Newsletter homepage. http://www.ctdnews.com

User and injured workers groups include lots of links and info from injured workers at the **Typing Injury FAQ at** http://www.tifaq.org/ and **RSI/UK** Information about Repetitive Stress Injuries (RSI) originating from the UK, with information gathered from sources around the globe http://www.rsi-uk.org.uk. The **Job Stress Network** web page is dedicated to increasing communication among researchers and others interested in job stress and its impact on health http://www.workhealth.org.
Usernomics Ergonomics is a commercial site around disability and usability issues. http://www.usernomics.com **IBM's** website.on computer ergonomics is at http://www.pc.ibm.com/ww/healthycomputing/index.html, **Medical Multimedia Group** has patient education materials with good graphics and explanations. http://www.medicalmultimediagroup.com

J. Appendix 4: Who's Who: Resources in Connecticut on Job Safety and Health

Academic Programs and Courses

Central Connecticut State University, School of Technology
Type of Degree: Bachelor of Science in Industrial Technology with a Specialization in Environmental and Occupational Safety
Faculty contact: Paul J. Resetarits, Ph.D
Address: Copernicus Hall Rm. 21210000, CCSU, 1615 Stanley Rd., New Britain, CT 06050
Phone: (860) 832-1834
e-mail: Resetarits@ccsu.edu
Web: http://finalsite.ccsu.edu/page.cfm?p=6665

University of Connecticut Health Center, Department of Community Medicine, MPH Program
Masters in Public Health program with ergonomic/occupational health courses.
Director: David Gregorio, Ph.D.
Address: UConn Health Center, 263 Farmington Ave., Farmington, CT 06030-6325
Phone: (860) 679-5480
Fax: (860) 679-1581
e-mail: gregorio@nso.uchc.edu
Web: http://www.commed.uchc.edu/ed/mph/index.html

University of Connecticut Health Center, Ph.D. in Public Health with a concentration in Occupational and Environmental Health Sciences
Co-Directors: Nick Warren, Sc.D., MAT and Larry Silbart, Ph.D.
Address: UConn Health Center, 263 Farmington Ave., Farmington, CT 06030-6210
Phone: (860) 679-4023
Fax: (860-679-1349
e-mail: publichealth@uconn.edu
Web: http://www.commed.uchc.edu/ed/phd/index.html

OSHA

ConnOSHA: ConnOSHA is a state agency that inspects in the public sector, and does consultations in the private sector**.**
Director: Ken Tucker
Address: Labor Dept., 38 Wolcott Hill Rd., Wethersfield, CT 06109
Phone: (860) 263-6900
Fax: (860) 263-6940
Web: http://www.ctdol.state.ct.us/osha/osha.htm
Publications: ConnOSHA Quarterly

OSHA (Occupational Safety and Health Administration): Federal OSHA inspects workplaces in the private sector for violations of standards, and also has information and pamphlets.
OSHA Bridgeport Office (Fairfield, New Haven, and Middlesex counties).
Director: Robert W. Kowalski

The Who's Who is compiled by Tim Morse, Ph.D., UConn Health Center.
To update or add a listing, please contact him at tmorse@uchc.edu or 860-679-4720

Address: 1057 Broad Street, 4th Floor
Bridgeport, Connecticut 06604
Phone: (203) 579-5581; National Hotline after hours, etc.: (800) 321-OSHA (6742)
Fax: (203) 579-5516
Web: http://www.osha.gov/ (national)

OSHA Hartford Office
Director: Paul Mangiafico
Address: 450 Main St., Room 613, Hartford, CT 06103
Phone: (860) 240-3152; National Hotline after hours, etc.: (800) 321-OSHA (6742)
Fax: (860) 240-3155

Academic Occupational Health Clinics

University of Connecticut Occupational and Environmental Health Center
Clinic Director: Dr. Oluremi Aliyu
Address: UConn Health Center, 270 Farmington Ave, The Exchange, Suite 262, Farmington, CT 06030-6210
Phone: (860) 679-2893
Fax: (860) 679-1349
e-mail: aliyu@uchc.edu
Web: www.oehc.uchc.edu

Yale Occupational and Environmental Medicine Program
Director: Dr. Carrie A. Redlich
Address: Occupational and Environmental Medicine, 135 College St. Rm. 366, New Haven, CT 06510
Phone: (203) 785-4197
Fax: (203) 785-7391
e-mail: Carrie.Redlich@yale.edu
Web: http://info.med.yale.edu/intmed/occmed/

Occupational Health Clinics

Hartford Medical Group—Occupational Health
Director: Peter Kowalski
Address: 1025 Silas Deane Highway, Wethersfield, CT 06109
Phone: (860) 696-2400
Fax: (860) 696-2411
e-mail: pkowalski@harthosp.org
Web: http://www.hartfordmedicalgroup.com/index.cfm/fuseaction/site.content/type/44158/custom/1.cfm
Other Offices:
100 Simsbury Road Suite 203, Avon (860) 284-5111;
1776 Boston Turnpike, Coventry (860) 742-7315;
265 Ellington Rd., East Hartford, (860) 569-8800;
100 Hazard Avenue, Suite 101, Enfield, (860) 696-2380;
676 Hebron Avenue, Glastonbury, (860) 696-2250;
256 N Main Street Manchester (860) 696-2300;
336 N Main Street West Hartford (860) 232-4891;
445 S Main Street, West Hartford (860) 561-7111;

1060 Day Hill Road Windsor (860) 683-2690.

Occupational Health Plus, St. Raphael Hospital
Director: Dr. Peter Amato
Address: 175 Sherman Ave., New Haven, CT 06511
Phone: (203) 789-3392
Fax: (203) 867-5455
e-mail: pamato@srhs.org
Web: http://www.srhs.org/occhealth
Other Offices:
84 North Main Street, Suite 200, Branford (203) 789-5195;
2080 Whitney Ave., Suite 150 Hamden (203) 789-6240

Griffin Hospital Occupational Medicine
Address: 100 Commerce Drive. Shelton, CT 06484
Director: Dave Maffei
Phone: (203) 944-3718
Fax: (203) 929-3068
e-mail: dmaffei@griffinhealth.org
Web: http://www.griffinhealth.org/Occupational-Medicine-Center.aspx

Concentra
Address: 701 Main Street, East Hartford, CT 06108
Medical Director: David Feinstein
Phone: (860) 289-5561
Fax: (860) 291-1895
e-mail: david_feinstein@concentra.com
Web: www.concentra.com
Other Offices:
972 A West Main Street, New Britain (860) 827-0745;
1080 Day Hill Road, Windsor (860) 298-8442;
8 South Commons Rd, Waterbury (203) 759-1229;
333 Kennedy Drive, Torrington (860) 482-4552;
900 Northrup Rd, Wallingford (203) 949-1534;
370 James Street, New Haven (203) 503-0482;
555 Lordship Blvd, Stratford (203) 380-5945;
15 Commerce Road, 3rd Floor, Stamford, (203) 324-9100;
10 Connecticut Avenue, Norwich, (860) 859-5100.

Eastern Rehabilitation Network, Hartford Hospital
Director: Subramani Seegharama
Address: 181Patricia M Genova Drive, Newington, CT 06111
Phone: (860) 696-2500
Fax: (860) 696-2525
e-mail: mail@easternrehab.net
Web: www.easternrehab.net
Other Offices:

100 Simsbury Road, Avon (860) 674-0255;
100 Hazard Avenue, Enfield, (860) 696-2690;
265 Ellington Road, East Hartford (860) 291-2789;
330 Western Boulevard, Glastonbury (860) 657-4723;
18 East Granby Road Granby (860) 653-2301;
85 Seymour Street, Suite 604, Hartford (860) 545-5130;
252 North Main Street Manchester (860) 643-3562;
1064 East Main Street Meriden (203) 235-9622;
445 South Main Street West Hartford (860) 521-8800;
334 North Main Street, West Hartford (860) 236-7771:
Blue Back Square, 65 Memorial Road, West Hartford, (860)231-1707;
1025 Silas Deane Highway Wethersfield (860) 696-2670;
1060 Day Hill Road Windsor (860) 688-0236;
863 North Main St. Ext., Wallingford, (203) 694-5528.

Middlesex Hospital Occupational Med.
Director: Thomas J. Danyliw, M.D.
Address: 534 Saybrook Rd., Middletown, CT 06457
Phone: (860) 358-2750
Fax: (860) 348-2757
e-mail: tom_danyliw_md@midhosp.org
Web: http://middlesexhospital.org/our-services/hospital-services/occupational-medicine/overview/occupational-medicine-at-middlesex-hospital
Other Office: 192 Westbrook Road, Essex (860) 358-3840

Johnson Occupational Medicine
Director: Michael Erdil
Coordinator: Kathleen Heim
Address: 140 Hazard Ave., Suite 101. Enfield, CT 06082
Phone: (860) 763-7668
Fax: (860) 763-7676
Web: http://www.jmmc.com/jomc-main.php

St. Mary's Hospital Occ. Health Center
Medical Director: Erica Martinucci
Address: 1320 West Main St., Building 1, Waterbury, CT 06708
Phone: (203) 709-3740
Fax: (203) 709-3741
Web: http://www.stmh.org/patient_services/occupational_health.html

Lawrence and Memorial Occupational Health Center (Pequot Health Center)
Medical Director: Geraldine Ruffa
Contact: Ruth Moreau
Address: 52 Hazlenut Hill Rd., Groton, CT 06340
Phone: (860) 446-8265 x 7074
Fax: (860) 448-6961
Email: rmoreau@lmhosp.org

Web: http://www.lmhospital.org/content/OccupationalHealthCenter.htm
Other site: 248 Flanders Road, Niantic, (860) 691-1890

Connecticut Occupational Medicine Partners, St. Francis Hospital and Medical Center
Director: Hunter Giroux; **Contact:** Elaine Durato
Address (corporate): 675 Tower Avenue, Suite 404B, Hartford, CT 06112
Phone: (860) 714-6188
Fax: (860) 714-8068
e-mail: hgiroux@stfranciscare.org
Web: http://www.stfranciscare.org/body.aspx?id=6820
Medical Offices: Gengras Building, Suite 4302, 114 Woodland Street Hartford: 860-714-4270; 1598 East Main St, Torrington, (860) 482-3467; 100 Deerfield Road, Windsor, 860-714-9444; also MedWorks and CorpCare locations below.

CorpCare Occupational Health Center (ECHN)
Director: Carol Holman
Address: 1075 Tolland Turnpike, Manchester, CT 06040
Phone: (860) 647-4796
Fax: (860) 646-3945
Web: http://www.echn.org/Locations/CorpCare-Occupational-Health.aspx

MedWorks (member of CT Occupational Medicine Partners, below)
Director: Anne Burch
Address: 539 Farmington Ave. Bristol, CT 06010
Phone: (860) 589-0114
Fax: (860) 589-1936
e-mail: aburch@bristolhospital.org
Web: http://www.bristolhospital.org/Services/medworks.aspx
Other Office: 375 East Cedar St., Newington (860) 667- 4418

Organizations

American Lung Association of New England
A non-profit association geared towards preventing lung disease, including occupational lung disease.
Senior Director: Cathie Arnold
Connecticut Address: 45 Ash St., East Hartford, CT 06108
Phone: (860) 289-5401
Fax: (860) 289-5405
e-mail: alaofct@aol.com
Web: http://www.lungusa.org/associations/states/connecticut

Connecticut Safety Council/Safety Roundtable

Associated with the Connecticut Business and Industry Association, the Council offers seminars, training courses, consulting, and policy discussions on safety and regulations.

Contact: Mark Soycher
Address: 350 Church St. Hartford, CT 06103-1126
Phone: (860) 244-1900
Fax: (860) 278-8562
e-mail: Mark.Soycher@cbia.com
Web: http://www5.cbia.com/hr/

ConnectiCOSH (The Connecticut Council for Occupational Safety and Health)

CTCOSH is a union-based non-profit organization for education and political action on job safety and health. They have conferences, fact sheets, and speakers.

Director: Mike Fitts
Address: 683 No. Mountain Rd, Newington, CT 06111
Phone: (860) 953-COSH (2674)
Fax: (860) 953-1038
e-mail: mike.ctcosh@snet.net
Web: http://connecticosh.org

Coalition for a Safe and Healthy Connecticut

A community-based coalition of environmental, public health, and labor organizations providing resources and advocacy for reducing the use of toxic chemicals through substitution of safer alternatives.

Coordinator: Anne Hulick
Address: c/o Clean Water Action, 645 Farmington Ave., Fl. 3, Hartford, CT, 06105
Phone: (860) 232-6232
Fax: (860) 232-6334
e-mail: ahulickl@cleanwater.org
Web: http://www.safehealthyct.org

Ergonomic Technology Center (ErgoCenter) and Healthy Workplace Center (Center for the Promotion of Health in the New England Workplace)

The ErgoCenter is a center for prevention of repetitive strain injuries based at UConn Health Center, which does training, research, consulting, and clinical care, and the Healthy Workplace Center is a NIOSH-funded center combining occupational safety and health with health promotion.

Director: Martin Cherniack, MD, MPH
Address: ErgoCenter/Healthy Workplace Center, UCHC, Farmington, CT 06030-6210
Phone: (860) 679-4916
Fax: (860) 679-1349
e-mail: cherniack@nso.uchc.edu
Web: http://www.oehc.uchc.edu/ergo.asp

Center for Indoor Environments and Health

The CIEH at the University of Connecticut Health Center specific mission is to promote indoor environments which protect the health of building occupants and provide productive, creative spaces for learning and work.

Asst. Director: Paula Schenck, MPH
Address: The Exchange Bldg Suite 262, 270 Farmington Avenue, Farmington, Connecticut 06030-6210,

Phone: (860) 679-2368
Fax: (860) 679-1349
e-mail: schenck@nso2.uchc.edu
Web: http://www.oehc.uchc.edu/CIEH.asp

Professional Organizations

American Industrial Hygiene Association (AIHA), Connecticut River Valley Section
A professional association for industrial hygienists.
President 2011: Mark Stuhlman
Address: Hamilton Sundstrand, One Hamilton Rd. MS 1-M-S, Windsor Locks, CT 06096
Phone: (860) 654-3661
e-mail:mark.stuhlman@hs.utc.com
Web:http://www.aihacrv.org

Connecticut Safety Society: A professional association for safety inspectors
President: Matthew Slowik
Phone: (203) 260-3444
e-mail: president@ctsafety.org
Web: http://www.ctsafety.org

American Society of Safety Engineers (ASSE): A non-profit association for enhancing the competence and knowledge of the safety profession.
Connecticut Valley Chapter (Northern CT)
Address: Box 106, 1131-0 Tolland Turnpike, Manchester, CT 06040
President: Dave Boutin - dboutin@e-s-i.com
Communications Chair: David Gelpke, CSP
Phone: (203) 639-2440
e-mail: dgelpke@canberra.com
Web: http://ctvalley.asse.org
Nutmeg Chapter (Southern CT)
President: Walter Tucker (203) 865-6043 or wtucker@petraconstruction.com
Web: http://nutmeg.asse.org/index.php

Air & Waste Management Association (AWMA), Connecticut Chapter
The Air & Waste Management Association provides training, information, and networking opportunities to environmental professionals. The Connecticut Chapter, New England Section, provides periodic forums for discussion and sponsors an annual student scholarship.
Secretary: Dana Lowes-Hobson
Phone: (860) 298-6203
e-mail: dlowes-hobson@trcsolutions.com
Web: http://www.awmanewengland.org/connecticut_chapter.htm

Connecticut Trial Lawyers Association, Workers' Compensation Committee
An association of attorneys specializing in workers' compensation, mostly for claimants.
Executive Director: Neil Ferstand
Address: 150 Trumbull Street, 2nd Floor, Hartford, CT 06103

Phone: (860) 522-4345
Fax: (860) 522-1027
Web: www.cttriallawyers.org

CT Bar Association, Workers' Compensation Section
This is a professional association of attorneys who concentrate in workers' compensation.
Chair: Mark D Leighton
Phone: (860) 875-7000
e-mail: mleighton@leightonlawyers.com
Web: https://www.ctbar.org/Page.aspx?Id=868

New England College of Occupational and Environmental Medicine: The association for occupational medicine doctors, including many of the physicians working for industry.
Executive Director: Dianne Plantamura, MSW
Address: 22 Mill Street, Groveland, MA 01834
Phone: (978) 373-5597
e-mail: diannep@necoem.org
Web: http://www.necoem.org/

Occupational Health Nurses Association: The association of occupational health nurses, including most of the nurses working in industry.
State Representative: Mary Jane Chase-Yacovone
e-mail: mjjchase@aol.com
Web: www.aaohn.org

State Agencies

Department of Public Health, Occupational Health Unit
Investigates clusters of occupational diseases, with programs for radon, asbestos, AIDS, lead, TB control and infectious diseases also at the DPH.
Director: Tom St. Louis
Address: DPH/ OHP, 410 Capitol Ave, MS #11EOH, PO Box 340308, Hartford, CT 06134-0308
Phone: 860) 509-7740
Fax: (860) 509-7785
Web: http://www.ct.gov/dph/cwp/view.asp?a=3140&q=387472&dphNav_GID=1828

State Office of Emergency Management and Homeland Security
Commissioner: Peter Boynton
Phone: (860) 256-0800
Fax: (860) 256-0815
e-mail: comm.demhs@ct.gov
Web: http://www.ct.gov/demhs/site/default.asp

State Emergency Response Commission, DEP/ Bureau of Waste Management
Oversees plans for response to chemical accidents and collects chemical information for the public under Community Right to Know.
Administrator: Mark DeCaprio

Address: 79 Elm St., 4th Floor, Hartford, CT 06106-5127
Phone: (860) 424-3373
Fax: (860) 424-4062
e-mail: dep.ctepcra@ct.gov
Web: http://www.ct.gov/serc

Connecticut Fire Academy, Commission on Fire Prevention & Control
Safety training & standards compliance.
Training Director: Adam Piskura
Address: 34 Perimeter Road, Windsor Locks, CT 06096-1069
Phone: (860) 627-6363 or toll free (877) 5CT-FIRE (only in CT)
Fax: (860) 654-1889
e-mail: adam.piskura@ct.gov
Web: www.state.ct.us/cfpc

CT Department of Environmental Protection, Radiation Safety Unit
Director: Edward Wilds
Phone: (860) 424-3029; (860) 424-3333 24/7 Emergency
Fax: (860) 424-4065
e-mail: edward.wilds@ct.gov
Web: http://www.ct.gov/dep/cwp/view.asp?a=2713&q=324824&depNav_GID=1639&depNav=|

Workers' Compensation Commission
Chairman's Office and Review Board
Oversees Workers' Compensation benefits, provides educational services on occupational safety and health, safety and health committees, and provides rehabilitation services for workers injured on the job.
Chairman: John A. Mastropietro
Address: 21 Oak St., 4th Floor, Hartford, CT 06106-8011
Phone: (860) 493-1500
Information: (800) 223-WORK (9675)
Fax: (860) 247-1361
e-mail: wcc.chairmansoffice@po.state.ct.us
Web: http://wcc.state.ct.us/

Workers' Compensation District Offices
1. 999 Asylum Ave., Hartford, CT 06105; (860) 566-4154; Fax: (860) 566-6137
2. 55 Main St., Norwich, CT 06360; (860) 823-3900; Fax: (860) 823-1725
3. 700 State St., New Haven, CT 06511; (203) 789-7512; Fax: (203) 789-7168
4. 350 Fairfield Ave., 2nd Floor, Bridgeport, CT 06604; (203) 382-5600; Fax: (203) 335-8760
5. 55 West Main St., Waterbury, CT 06702; (203) 596-4207; Fax: (203) 805-6501
6. 233 Main St., New Britain, CT 06051; (860) 827-7180; Fax: (860) 827-7913
7. 111 High Ridge Rd., Stamford, CT 06905-5111; (203) 325-3881; Fax: (203) 967-7264
8. 90 Court St., Middletown, CT 06457; (860) 344-7453; Fax: (860) 344-7487