

# THE ROLE OF THE INTERNIST IN OCCUPATIONAL MEDICINE

A Position Paper

of the

AMERICAN COLLEGE OF PHYSICIANS

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## INTRODUCTION

Almost all adults spend a significant portion of their lives working in a variety of occupational settings.\* There is considerable evidence that exposure to hazards in the workplace cause or exacerbate illness. To the extent that they care for persons of working age, all physicians are engaged in the practice of occupational medicine. The need for primary care physicians to address the occupational health care needs of their patients is as crucial as the need for their management of problems attributed to other known risks, such as smoking, obesity, and substance abuse. The internist is a major resource for patients concerned about home, workplace, or other environmental risks. The continuous care provided by internists transcends discontinuities of patients' employment histories. The internist is well suited to provide care for chronic conditions, particularly those with long latency.

In the past ten years, patients' understandings of the dangers related to workplace and other environmental risks have increased, encouraging consultation with primary care physicians. Patients present complaints or express health concerns that may or may not be related to their work environment. Physicians advise patients if and when they should return to work. Clearly, physicians must be knowledgeable about the nature of their patients' occupations and the effects of exposure to hazards in that environment.

However, the content of occupational medicine, as it relates to the practicing physicians, is seldom considered in the education and training of physicians. The American College of Physicians encourages all internists to increase their awareness of their patients' work environments and the effects of any hazards to health that may be present in these settings.

## SUMMARY OF POSITIONS

1. Physicians, especially primary care internists, must address the occupational health care needs of their patients. Physician responsibilities in providing care to patients of working age include identification of occupational and other environmental health risks, treatment of disease and injury, and patient counseling about preventive behavior.
2. Physicians have a responsibility to improve the health of the population by working to prevent occupational and other environmental risks that cause injuries and diseases.

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\* The home, which is the primary worksite for many, contains a large number of domestic occupational hazards and thus is considered as part of the work environment in this paper.

## POSITION 1

Physicians, especially primary care internists, must address the occupational health care needs of their patients. Physician responsibilities in providing care to patients of working age include identification of occupational and other environmental health risks, treatment of disease and injury, and patient counseling about preventive behavior.

## RATIONALE

It has long been recognized that the workplace environment contains hazards to which exposure can cause or exacerbate illness or injury. For example, millions of workers in this country are exposed to silica, asbestos, cotton, and other dusts, which may cause silicosis, asbestosis, "brown lung," or other forms of occupational lung disease. Knowledge that a patient works in such an environment permits and even mandates the physician to counsel about lung disease prevention, to perform diagnostic tests early and often, and to seek specialist consultation and treatment when necessary.

Increasingly, because of the growth of the chemical industry\* and the accelerating complexity and diversity of the present work environment, there are more patients exposed (often unknowingly) to more toxic substances, pollutants, and other environmental hazards at the worksite. Correspondingly, the medical and scientific communities are continuously expanding their knowledge of the associations between diseases and chemical exposure, and the number of linkages between certain human diseases and specific chemical exposures is growing; for example, liver hemangiosarcoma to vinyl chloride, mesothelioma to asbestos, and neurologic disease to methyl mercury. As the 1979 Surgeon General's Report on Health Promotion and Disease Prevention summarizes, "There is virtually no major chronic disease to which environmental factors do not contribute, directly or indirectly" (1).

Patients too are becoming more aware of occupational and other environmental risks, stimulating them to consult their primary care physicians about the safety of their job settings as well as to present complaints thought to be related to their work environments. Physicians thus are being asked to perform occupational assessments in addition to the more traditional disability evaluations.

Physicians have been criticized as poorly prepared to perform even these disability evaluations: "medical education generally neglects training" (2) in the difference between impairment--a medical condition--and disability, determination of which is dependent on age, sex, education, economic factors, and the social environment as well as impairment (2). Disability evaluations generally require a detailed occupational history to allow the physician to "comment on the probable causes of the alleged disability, give the diagnostic findings, and state whether the condition is impairing and to what extent, as well as whether it would limit return to usual or past work, and whether it is progressing, stable, or improving" (2).

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\* Prior to World War II, the United States produced 1 million pounds per year of synthetic organic chemicals. By 1965 this amount had increased to over 100 billion pounds yearly; today it is in excess of 300 billion pounds per year. More than 4 million chemical compounds are now recognized, more than 60 thousand are commercially produced; and approximately 1,000 new compounds are introduced each year.

Physicians' need to identify occupational and other environmental risks to which their patients may be exposed is growing with the increases in occupational risks and in knowledge about these risks. The College commends to its membership an intellectual framework for detecting events that signal the need for intervention (see attachment).

A patient's history ideally should include a few key questions designed to facilitate the physician's knowledge of how patients spend their days and should include names of substances or description of hazards that pose physical, chemical, biologic, psychologic, or sociologic risk to the patient. Physicians treating patients of retirement age should also inquire about past exposures, particularly exposures known to produce adverse effects on health status after long latency periods when early detection of such effects may alter therapy. These questions should be followed by further exploration in those patients for whom significant potential workplace or other environmental hazards exist. The seriousness of occupational and other environmental risks justifies a substantial and consistent commitment to such history taking by all primary care physicians. Sound data obviously enhance accurate diagnosis and treatment, including counseling about the possible dilemmas a patient faces in deciding between an exposure to a workplace or other environmental hazard and a job or lifestyle change. Helpful as part of a full occupational history are listings of protective equipment the patient has used, which will provide considerable insight into potential hazards (examples of such equipment are specialized clothing, filtration respirators or masks, air supplied respirators, protective eye wear, safety shoes, and ear defenders). A number of occupational history forms have been devised (examples are attached to this paper), and the College recommends that practitioners incorporate questions about patients' occupations and ways they spend their days into their history taking.

Physicians and patients both should be aware of the physician's dual responsibilities when performing health evaluations required by the employer. In cases covered by workers compensation, the medical record may be subject to legal discovery. Reports may be required by the patient's employer when a physician performs a pre-employment screening examination or periodic health evaluation. These reports should cover only the patient's work ability. Personal health information should remain in the patient's record in the physician's office, but may be subject to subpoena in legal actions. The physician's obligation to the patient's employer, in any case, is limited to provision of medical advice only about the patient's ability to work with or without restrictions. The physician has an obligation to inform the patient of the findings and their implications. The patient should be informed if any disability or disease may be work-related and possibly compensable under law.

## POSITION 2

Physicians have a responsibility to improve health of the population by working to prevent occupational and other environmental risks that cause injuries and diseases.

## RATIONALE

Medical concerns related to the workplace and other environments transcend the doctor-patient relationship and mandate a responsibility for physicians,

individually and collectively, to improve the health of the public. Improving and ensuring the public health frequently includes addressing the problems of environmentally related disease. Although public health practice has evolved from its early emphasis on public sanitation and controlling deaths from infection, it faces new challenges in detecting and addressing those modern day aspects of the man-made environment, including the occupational environment, that are factors in the causation of illness and death.

The increase in life expectancy reflects success in improving sanitation and in preventing and treating many diseases. The increase in chronic health problems (e.g., lung, cardiovascular, and gastroenteric diseases as well as disabling conditions due to injuries or detrimental exposure in the workplace) testifies in part to present difficulties in controlling environmental hazards. Cancer, heart disease, and pulmonary disease have emerged as dominant public health problems, and a growing body of evidence raises serious concerns about any role occupational factors may have in causing or exacerbating these and other major diseases.

A major role by which physicians can fulfill their public health responsibilities is to encourage good health practices in the workplace. Individual practitioners can work toward this goal by providing necessary medical services for workers. Many physicians who work in industrial settings are specialists in occupational medicine. There are, however, only about 800 physicians who are board-certified in occupational medicine. These few physicians cannot adequately serve the health care needs of the country's 90,000,000 paid workers. A survey performed in a highly industrialized section of New Jersey, characterized by the highest cancer rates in the United States, found that 137 industries in that area are served by 67 physicians, 20 of whom practice in-plant and most of whom work part-time. Two of these 67 are board certified in occupational medicine. Fifty percent are surgical specialists and 30% are general or family practitioners. Demand for services of primary care practitioners in the workplace, such as those provided by the subjects of this survey, will continue and probably increase for a long time. There is a need for physician treatment of the health care needs of workers both in the workplace and outside it.

Physicians also can encourage good health practices in the workplace by developing and implementing a national system of occupational health surveillance (3). It has been envisioned that physicians' reports of occupationally-related diseases could be collated at a central clearinghouse and analyzed to provide data that could 1) help educate the profession about particular hazards and their effects, 2) encourage research about treatment for conditions caused or exacerbated by these hazards, and 3) help educate the industry and public at large about these hazards and alternatives to them. Implementation of such a system also might support the practicing physician's use of occupational histories and could encourage the medical community, the public, and policy makers to recognize and control environmental hazards that contribute to disease, injury, and death. The American College of Physicians believes this concept to be worthy of further study and consideration and will be exploring the use of such a system as a means of continuing medical education as part of its on-going study on "Educational Needs in Occupational Medicine."

Additionally, physicians, along with workers and others, can collectively work to effect changes in the workplace by influencing legislative and regulatory approaches to securing a safe and healthy environment for the

public. There is need also for physician involvement in policy formulation on environmental health hazards. Discussion of environmental issues has become a permanent part of the Congressional agenda. Existing laws are periodically reviewed and revised, and efforts to extend or reauthorize a major piece of environmental policy frequently lead to reopening of the debate on sensitive issues, in particular, on the appropriate balance between protection of human health and costs to society and industry.

Debate on occupational and environmental health legislation and regulation frequently is conducted from a standpoint of economic analysis as opposed to public health policy. For years, public health advocates within Congress have urged greater participation in the environmental debate by individuals and organizations with scientific and medical expertise. These contributions are needed during congressional review of a variety of health concerns. Examples include setting federal standards on lead, benzene, and cotton dust exposure; on the need for and feasibility of scientific studies on the health of Air Force base personnel based at sites of nuclear tests; on the scientific evidence on "causation" as a basis for financial compensation for individuals exposed to radioactive fallout during the 1950s atomic testing program; and on the health status of former military personnel exposed to phenoxy acid herbicides ("Agent Orange"). The American College of Physicians views as one of its responsibilities the provision of medical data necessary to help construct a sound scientific base for public policy development.

#### CONCLUSION

Occupational and other environmental hazards cause disease, injury, and death. The education of physicians about these hazards is extremely limited. Physicians have an obligation to their patients and the public to recognize, treat, and work to prevent occupationally related illness and injury.

The American College of Physicians urges physicians to recognize and fulfill their roles in occupational medicine. Physicians should learn more about these roles; a self-study guide is provided with this Position Paper. Additionally, the College commends to the medical education community exploration of ways to increase the quantity and quality of courses and training programs in occupational medicine. The College suggests that internal medicine residency programs include occupational medicine training. The College recommends inclusion of an occupational history for all patients of working age. The American College of Physicians urges its members and all physicians to join in the individual and collective responsibilities to improve workplace and other environmental conditions.

## NOTES

1. Healthy people - the Surgeon General's report on health promotion and disease prevention. Washington, D.C.: Government Printing Office, 1979. (DHEW Pub. No. (PHS) 79-55071)
2. Ziporyn T. Disability evaluation: a fledgling science? JAMA 1983; 250(7): 873-80.
3. Rutstein DD et al. Sentinel health events (occupational): a basis for physician recognition and public health surveillance. American Journal of Public Health 1983; 73(9): 1054-62.

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**Sentinel Health Events (Occupational):  
A Basis for Physician Recognition  
And Public Health Surveillance**

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**Abstract:** A Sentinel Health Event (SHE) is a preventable disease, disability, or untimely death whose occurrence serves as a warning signal that the quality of preventive and/or therapeutic medical care may need to be improved. A SHE (Occupational) is a disease, disability, or untimely death which is occupationally related and whose occurrence may: 1) provide the impetus for epidemiologic or industrial hygiene studies; or 2) serve as a warning signal that materials substitution, engineering control, personal protection, or medical care may be required. The present SHE(O) list encompasses 50 disease conditions that are linked to the workplace. Only

those conditions are included for which objective documentation of an associated agent, industry, and occupation exists in the scientific literature. The list will serve as a framework for developing a national system for occupational health surveillance that may be applied at the state and local level, and as a guide for practicing physicians caring for patients with occupational illnesses. We expect to update the list periodically to accommodate new occupational disease events which meet the criteria for inclusion. (*Am J Public Health* 1983; 73:1054-1062.)

TABLE A-(O)—Occupationally Related Unnecessary Disease, Disability, and Untimely Death

ICD-9	CONDITION	A	B	C	INDUSTRY/OCCUPATION <sup>6</sup> †	AGENT
011	Pulmonary Tuberculosis (0)*	P*	P,T*	P,T	Physicians <sup>21</sup> , medical personnel <sup>143</sup> , med lab workers <sup>69</sup> .	<i>Mycobacterium tuberculosis</i> . <sup>21,69,143</sup>
011, 502	Silicotuberculosis	P	P,T	P,T	Quarrymen, sandblasters, silica processors, mining, metal foundries, ceramic industry. <sup>33</sup>	SiO <sub>2</sub> + <i>Mycobacterium tuberculosis</i> . <sup>33,82,156</sup>
020	Plague (0)	P	—	P,T	Shepherds, farmers, ranchers, hunters, field geologists. <sup>17</sup>	<i>Yersinia pestis</i> . <sup>17</sup>
021	Tularemia (0)	P	—	P,T	Hunters, fur handlers, sheep industry workers <sup>89</sup> , cooks, vets, ranchers, vet pathologists. <sup>169</sup>	<i>Francisella tularensis</i> . <sup>89,169</sup>
022	Anthrax (0)	P	—	P,T	Shepherds, farmers, butchers, handlers of imported hides or fibers <sup>30</sup> , veterinarians, veterinarian pathologists, weavers. <sup>118</sup>	<i>Bacillus anthracis</i> . <sup>30,118,170</sup>
023	Brucellosis (0)	P	P	P,T	Farmers, shepherds, veterinarians, lab workers <sup>132</sup> , slaughterhouse workers. <sup>118,170</sup>	<i>Brucella abortus, suis</i> . <sup>118,132,170</sup>
037	Tetanus (0)	P	—	P,T	Farmers, ranchers. <sup>169</sup>	<i>Clostridium tetani</i> . <sup>169</sup>
056	Rubella (0)	P	P	P	Medical personnel <sup>81,113,142</sup> , intensive care personnel <sup>143</sup> .	Rubella virus. <sup>81,113,142</sup>
070.0 .1	Hepatitis A (0)	P	P	P	Day care center staff <sup>66,171</sup> , orphanage staff <sup>37</sup> , mental retardation institution staff <sup>71,184</sup> , medical personnel <sup>82</sup> .	Hepatitis A virus. <sup>37,82,85,71,184,171</sup>
070.2 .3	Hepatitis B (0)	P	P	P	Nurses and aides, <sup>54,87,88</sup> anesthesiologists <sup>36</sup> , orphanage and mental institution staff <sup>54</sup> , med lab personnel <sup>88,102,108</sup> , general dentists <sup>124</sup> and oral surgeons <sup>55</sup> , physicians <sup>67,88,102</sup> .	Hepatitis B virus. <sup>38,54,85,87,88,102,108</sup>
070.4	Non-A, Non-B Hepatitis (0)	P	P	P	As above for hepatitis A and B	Unknown.
071	Rabies (0)	P	—	P	Veterinarians, animal and game wardens, lab researchers, farmers, ranchers, trappers. <sup>169</sup>	Rabies virus. <sup>169</sup>
073	Ornithosis (0)	P	—	P,T	Psittacine bird breeders, pet shop staff, poultry producers, veterinarians, zoo employees. <sup>119</sup>	<i>Chlamydia psittaci</i> . <sup>119</sup>
155M <sup>a</sup>	Hemangiosarcoma of the Liver	P	P	P	Vinyl chloride polymerization industry. <sup>42</sup>	Vinyl chloride monomer. <sup>42,88,87,188,184</sup>
160.0	Malignant Neoplasm of Nasal Cavities (0)	P	P,T	P,T	Woodworkers, cabinet, furniture makers. <sup>12,14,34,107,151</sup> Boot and shoe industry. <sup>11,12</sup> Radium chemists and processors <sup>82</sup> , dial painters <sup>147</sup> . Chromium producers, processors, users. <sup>88</sup> Nickel smelting and refining. <sup>48,85,178</sup>	Hardwood dusts. <sup>12,14,34,107,151</sup> Unknown. <sup>11,12</sup> Radium. <sup>82,147</sup> Chromates. <sup>88</sup> Nickel. <sup>48,85,88,178</sup>
161	Malignant Neoplasm of Larynx (0)	P	P,T	P,T	Asbestos industries and utilizers. <sup>148</sup>	Asbestos. <sup>88,148</sup>
162	Malignant Neoplasm of Trachea, Bronchus, and Lung (0)	P	P	P	Asbestos industry and utilizers. <sup>34,49,89</sup> Topside coke oven workers. <sup>104,148,148</sup> Uranium and fluorspar miners. <sup>45</sup> Chromium producers and processors <sup>81</sup> , users. <sup>108,172</sup> Nickel smelters, processors, users. <sup>48,85</sup> Smelters. <sup>175</sup> Mustard gas formulators. <sup>182</sup> Ion exchange resin makers, chemists. <sup>57,185</sup>	Asbestos. <sup>24,49,89,89,159</sup> Coke oven emissions. <sup>104,148,148</sup> Radon daughters. <sup>45</sup> Chromates. <sup>51,88,108,172</sup> Nickel. <sup>48,85,88</sup> Arsenic. <sup>88,175</sup> Mustard gas. <sup>182</sup> Bis(chloromethyl) ether, chloromethyl methyl ether. <sup>57,88,185</sup>
158, 163	Mesothelioma (MN of Peritoneum) (MN of Pleura)	P	—	P	Asbestos industries and utilizers. <sup>24,89</sup>	Asbestos. <sup>24,82,88,88,159,180</sup>
170	Malignant Neoplasm of Bone (0)	P	—	P	Dial painters <sup>109</sup> , radium chemists and processors. <sup>82</sup>	Radium. <sup>82,109</sup>
187.7	Malignant Neoplasm of Scrotum	P	—	P,T	Automatic lathe operators <sup>72,81</sup> , metalworkers <sup>150</sup> . Coke oven workers, petroleum refiners, tar distillers. <sup>72</sup>	Mineral/cutting oils. <sup>72,88,81</sup> Soots and tars, tar distillates. <sup>72,88</sup>
188	Malignant Neoplasm of Bladder (0)	P	—	P	Rubber and dye workers. <sup>39,40,188</sup>	Benzidine <sup>158,188</sup> , alpha and beta naphthylamine <sup>39,88</sup> , auramine <sup>40,88</sup> , magenta <sup>40,88</sup> , 4-aminobiphenyl <sup>118</sup> , 4-nitrophenyl. <sup>88,178</sup> Coke oven emissions. <sup>145,148</sup>
189	Malignant Neoplasm of Kidney, Other, and Unspecified Urinary Organs (0)	P	P	P	Coke oven workers. <sup>145,148</sup>	Coke oven emissions. <sup>145,148</sup>
204	Lymphoid Leukemia, Acute (0)	P	—	P	Rubber industry. <sup>114,115</sup> Radiologists. <sup>110,111</sup>	Unknown. <sup>114,115</sup> Ionizing radiation. <sup>41,110,111</sup>
205	Myeloid Leukemia, Acute (0)	P	—	P	Occupations with exposure to benzene Radiologists. <sup>110,111</sup>	Benzene. <sup>18,83,84,88,180,181</sup> Ionizing radiation. <sup>41,110,111</sup>
207.0	Erythroleukemia (0)	P	—	P	Occupations with exposure to benzene.	Benzene. <sup>18,83,84,88,180,181</sup>
283.1	Hemolytic Anemia, Non-auto-immune (0)	P	—	P,T	Whitewashing and leather industry. <sup>44</sup> Electrolytic processes, arsenical ore smelting. <sup>78</sup> Plastics industry. <sup>15</sup> Dye, celluloid, resin industry. <sup>89</sup> Explosives manufacture. <sup>81,182</sup> Occupations with exposure to benzene. Radiologists <sup>111</sup> , radium chemists and dial painters. <sup>183</sup> .	Copper sulfate. <sup>44</sup> Arsine. <sup>78,82,134,138</sup> Trimellitic anhydride. <sup>15</sup> Naphthalene. <sup>89</sup> TNT. <sup>78,81,182</sup> Benzene. <sup>18,180,181</sup> Ionizing radiation. <sup>41,111,183</sup>
284.8	Aplastic Anemia (0)	P	—	P	Occupations with exposure to benzene. Radiologists <sup>111</sup> , radium chemists and dial painters. <sup>183</sup> .	Benzene. <sup>18,180,181</sup> Ionizing radiation. <sup>41,111,183</sup>

TABLE A-(O)—Continued

ICD-9	CONDITION	A	B	C	INDUSTRY/OCCUPATION <sup>a,†</sup>	AGENT
288.0	Agranulocytosis or Neutropenia (0)	P	—	P	Occupations with exposure to benzene. Explosives and pesticide industries. <sup>32</sup>	Benzene. <sup>16,180,181</sup> Phosphorus. <sup>32</sup>
289.7	Methemoglobinemia (0)	P	—	P,T	Pesticides, pigments, pharmaceuticals. <sup>83</sup> Explosives and dye industries. <sup>96,70,125,188</sup>	Inorganic arsenic. <sup>83</sup> Aromatic amino and nitro compounds (eg. aniline, TNT, nitroglycerin). <sup>96,70,81,125,188</sup>
323.7	Toxic Encephalitis (0)	P	P	P	Battery, smelter, and foundry workers. <sup>19,31</sup> Electrolytic chlorine production, battery makers, fungicide formulators. <sup>22,31</sup>	Lead. <sup>18,31</sup> Inorganic and organic mercury. <sup>22,31,56</sup>
332.1	Parkinson's Disease (Secondary) (0)	P	P	—	Manganese processing, battery makers, welders. <sup>154</sup>	Manganese. <sup>154,167</sup>
334.3	Cerebellar Ataxia (0)	P	P	—	Internal combustion engine industries. <sup>80</sup> Chemical industry using toluene. <sup>28</sup> Electrolytic chlorine production, battery makers, fungicide formulators. <sup>31,43</sup>	Carbon monoxide. <sup>80</sup> Toluene. <sup>28</sup> Organic mercury. <sup>31,43</sup>
357.7	Inflammatory and Toxic Neuropathy (0)	P	P,T	P,T	Pesticides <sup>75</sup> , pigments, pharmaceuticals. <sup>46</sup> Furniture refinishers, degreasing operations. <sup>74</sup> Plastic-coated-fabric workers. <sup>28</sup> Explosives industry. <sup>70</sup> Rayon manufacturing. <sup>96,178</sup> Plastics, hydraulics, coke industries. <sup>121</sup> Battery, smelter, and foundry workers. <sup>19,31</sup> Dentists <sup>89,161</sup> , chloralkali workers <sup>168</sup> . Chloralkali plants, fungicide makers, battery makers. <sup>43</sup>	Arsenic and arsenic compounds. <sup>46,75</sup> Hexane. <sup>74,155</sup> Methyl n-butyl ketone. <sup>28</sup> TNT. <sup>70</sup> CS <sub>2</sub> . <sup>56,155,177,179</sup> Tri-o-cresyl phosphate. <sup>121,166</sup> Inorganic lead. <sup>19,31,56,156</sup> Inorganic mercury. <sup>89,161,166</sup> Organic mercury. <sup>43,56</sup>
366.4	Cataract (0)	P	P,T	—	Plastics industry <sup>127</sup> , paper manufacturing <sup>100</sup> . Microwave and radar technicians. <sup>80</sup> Explosives industries. <sup>70</sup> Radiologists. <sup>120</sup> Blacksmiths, glass blowers, bakers. <sup>120</sup> Moth repellent formulators, fumigators. <sup>59</sup> Explosives, dye, herbicide and pesticide industries. <sup>130</sup>	Acrylamide. <sup>100,127,156</sup> Microwaves. <sup>80</sup> TNT. <sup>83,70</sup> Ionizing radiation. <sup>63,120</sup> Infrared radiation. <sup>83,120</sup> Naphthalene. <sup>59,63,120</sup> Dinitrophenol <sup>120</sup> , dinitro-o-cresol. <sup>130</sup>
388.1	Noise Effects on Inner Ear (0)	P	P	—	Exposure. <sup>131</sup>	Excessive noise. <sup>131</sup>
443.0	Raynaud's Phenomenon (Secondary) (0)	P	—	—	Lumberjacks <sup>97,144</sup> , chain sawyers, grinders, chip-pers. <sup>173</sup>	Whole body or segmental vibration. <sup>87,144,173</sup>
495.0 to 495.6, .8	Extrinsic Allergic Alveolitis	P	P	P,T	Vinyl chloride polymerization industry. <sup>47,88,103</sup> Farmer's lung, baggassosis, bird fancier's lung, tuberculosis, malt worker's lung, mushroom worker's lung, maple bark disease, cheese washer's lung, coffee worker's lung, fish-meal worker's lung, furrier's lung, sequoiosis, wood worker's lung, miller's lung. <sup>147,187</sup>	Vinyl chloride monomer. <sup>47,87,88,103</sup> Various agents. <sup>147,187</sup>
493.0, 507.8	Extrinsic Asthma (0)	P	P,T	P,T	Jewelry, alloy and catalyst makers. <sup>35,135</sup> Polyurethane, adhesive, paint workers. <sup>35,136</sup> Alloy, catalyst, refinery workers. <sup>35</sup> Solderers. <sup>35</sup> Plastic, dye, insecticide makers. <sup>35</sup> Foam workers, latex makers, biologists. <sup>35</sup> Printing industry. <sup>35</sup> Nickel platers. <sup>35</sup> Bakers. <sup>35,174</sup> Plastics industry. <sup>35,136</sup> Woodworkers, furniture makers. <sup>35</sup> Detergent formulators. <sup>35</sup>	Platinum. <sup>35,135,137</sup> Isocyanates. <sup>35,137,138</sup> Chromium and cobalt. <sup>35</sup> Aluminum soldering flux. <sup>35</sup> Phthalic anhydride. <sup>35,137</sup> Formaldehyde. <sup>35</sup> Gum arabic. <sup>35</sup> NiSO <sub>4</sub> . <sup>35</sup> Flour. <sup>35,174</sup> Trimellitic anhydride. <sup>35,136,137</sup> Red cedar and other wood dusts. <sup>35</sup> Bacillus-derived exoenzymes. <sup>35</sup>
500	Coalworkers' Pneumoconiosis	P	P	P	Coal miners. <sup>78,122</sup>	Coal dust. <sup>78,82,122</sup>
501	Asbestosis	P	P	P	Asbestos industries and utilizers. <sup>24,89,126</sup>	Asbestos. <sup>24,82,89,126,159</sup>
502M	Silicosis	P	P	P	Quarrymen, sandblasters, silica processors <sup>20</sup> , mining, metal, and ceramic industries. <sup>129,180</sup>	Silica. <sup>20,82,129,156,180</sup>
503M	Talcosis	P	P	P	Talc processors. <sup>85</sup>	Talc. <sup>85</sup>
504	Chronic Beryllium Disease of the Lung	P	P	P	Beryllium alloy workers, ceramic and cathode ray tube makers, nuclear reactor workers. <sup>88,183</sup>	Beryllium. <sup>88,183</sup>
504	Byssinosis	P	P	P	Cotton industry workers. <sup>28,117,128</sup>	Cotton, flax, hemp, and cotton-synthetic dusts. <sup>117,29,128</sup>
506.0, 506.1	Acute Bronchitis, Pneumonitis, and Pulmonary Edema Due to Fumes and Vapors (0)	P,T	P,T	P	Refrigeration, fertilizer <sup>101</sup> , oil refining industries. <sup>123</sup> Alkali and bleach industries. <sup>123</sup> Silo fillers, arc welders, nitric acid industry. <sup>58</sup> Paper and refrigeration industries, oil refining. <sup>123</sup> Cadmium smelters, processors. <sup>123</sup> Plastics industry. <sup>73</sup>	Ammonia. <sup>101,123</sup> Chlorine. <sup>123</sup> Nitrogen oxides. <sup>58,123</sup> Sulfur dioxide. <sup>123</sup> Cadmium. <sup>123</sup> Trimellitic anhydride. <sup>73</sup>
570, 573.3	Toxic Hepatitis (0)	P	P	P	Solvent utilizers, dry cleaners, <sup>23</sup> plastics industry <sup>105</sup> . Explosives and dye industries. <sup>82,70</sup> Fire and waterproofing additive formulators. <sup>79,84</sup> Plastics formulators. <sup>112</sup>	Carbon tetrachloride <sup>140</sup> , chloroform <sup>77</sup> , tetrachloroethane <sup>105</sup> , trichloroethylene. <sup>18,23</sup> Phosphorus <sup>82</sup> , TNT <sup>70,182</sup> . Chloronaphthalenes. <sup>79,84</sup> Methylenedianiline. <sup>112</sup>

TABLE A-(O)—Continued

ICD-9	CONDITION	A	B	C	INDUSTRY/OCCUPATION <sup>6†</sup>	AGENT
					Fumigators, gasoline, fire extinguisher formulators. <sup>133</sup>	Ethylene dibromide. <sup>133</sup>
					Disinfectant, fumigant, synthetic resin formulators. <sup>80</sup>	Creosol. <sup>80</sup>
584, 585	Acute or Chronic Renal Failure (0)	P	P,T	P,T	Battery makers, plumbers, solderers. <sup>157</sup>	Inorganic lead. <sup>157</sup>
					Electrolytic processes, arsenical ore smelting. <sup>79,138</sup>	Arsine. <sup>79,134,138,157</sup>
					Battery makers, jewelers, dentists. <sup>157</sup>	Inorganic mercury. <sup>157</sup>
					Fluorocarbon formulators, fire extinguisher makers. <sup>157</sup>	Carbon tetrachloride. <sup>84,157</sup>
606	Infertility, Male (0)	P	P	—	Antifreeze manufacture. <sup>25</sup>	Ethylene glycol. <sup>25</sup>
					Formulators. <sup>36</sup>	Kepon. <sup>36</sup>
					DBCP producers, formulators, and applicators. <sup>50,152,186</sup>	Dibromochloropropane. <sup>50,152,186</sup>
692	Contact and Allergic Dermatitis (0)	P,T	P,T	—	Leather tanning, poultry dressing plants, fish packing, adhesives and sealants industry, boat building and repair. <sup>13</sup>	Irritants (e.g., cutting oils, solvents, phenol, acids, alkalis, detergents); Allergens (e.g., nickel, chromates, formaldehyde, dyes, rubber products). <sup>148</sup>

External causes of injury and poisoning (occupational) include accidents and are classified in the ICD-9 under the E codes.

A = Unnecessary disease

B = Unnecessary disability

C = Unnecessary untimely death

<sup>6</sup> = INDUSTRY/OCCUPATION listings are examples only

†Industry/Occupation reference numbers inside commas and inside periods apply only to the immediately preceding category; those outside of periods apply to all prior categories pertaining to a particular agent or process.

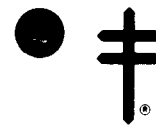
+ (0) = Only where an occupational exposure can be established

\* P = prevention, T = treatment

<sup>6</sup>M = Modified ICD rubric



# Occupational/Environmental History Form



**I. IDENTIFICATION**

Name: \_\_\_\_\_

Soc. Sec. \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Address: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Sex:    M    F

Birthdate: \_\_\_\_\_

Telephone: home \_\_\_\_\_ work \_\_\_\_\_

**II. OCCUPATIONAL PROFILE**

Fill in the table below listing all jobs at which you have worked, including short-term, seasonal, and part-time employment. Start with your present job and go back to the first. Use additional paper if necessary.

Workplace (Employer's name and address or city)	Dates worked		Did you work full time?	Type of Industry (Describe)	Describe your job duties	Known health hazards in workplace (dusts, solvents, etc.)	Protective equipment used?	Were you ever off work for a health problem or injury?
	From	To						

III. OCCUPATIONAL EXPOSURE INVENTORY

1. Please describe any health problems or injuries you have experienced connected with your present or past jobs: \_\_\_\_\_
2. Have any of your co-workers also experienced health problems or injuries connected with the same job? ..... No    Yes  
If yes, please describe: \_\_\_\_\_
3. Do you or have you ever smoked cigarettes, cigars, or pipes? ..... No    Yes  
If so, which and how many per day: \_\_\_\_\_
4. Do you smoke while on the job, as a general rule? ..... No    Yes
5. Do you have any allergies or allergic conditions? ..... No    Yes  
If so, please describe: \_\_\_\_\_
6. Have you ever worked with any substance which caused you to break out in a rash? ..... No    Yes  
If so, please describe your reaction and name the substance: \_\_\_\_\_
7. Have you ever been off work for more than a day because of an illness or injury related to work? ..... No    Yes  
If so, please describe: \_\_\_\_\_
8. Have you ever worked at a job which caused you trouble breathing, such as cough, shortness of wind, wheezing? No    Yes  
If so, please describe: \_\_\_\_\_
9. Have you ever changed jobs or work assignments because of any health problems or injuries? ..... No    Yes  
If so, please describe: \_\_\_\_\_
10. Do you frequently experience pain or discomfort in your lower back or have you been under a doctor's care for back problems? ..... No    Yes  
If so, please describe: \_\_\_\_\_
11. Have you ever worked at a job or hobby in which you came into direct contact with any of the following substances by breathing, touching, or direct exposure? If so, please check the box beside the substance.

- |  |   |  |   |  |  |  |
|--|---|--|---|--|--|--|
| <input type="checkbox"/> Acids                 | <input type="checkbox"/> Beryllium                | <input type="checkbox"/> Chromates           | <input type="checkbox"/> Heat (severe)      | <input type="checkbox"/> Nickel            | <input type="checkbox"/> Radiation     | <input type="checkbox"/> Trichloroethylene |
| <input type="checkbox"/> Alcohols (industrial) | <input type="checkbox"/> Cadmium                  | <input type="checkbox"/> Coal dust           | <input type="checkbox"/> Isocyanates        | <input type="checkbox"/> Noise (loud)      | <input type="checkbox"/> Rock dust     | <input type="checkbox"/> Trinitrotoluene   |
| <input type="checkbox"/> Alkalis               | <input type="checkbox"/> Carbon tetrachloride     | <input type="checkbox"/> Cold (severe)       | <input type="checkbox"/> Ketones            | <input type="checkbox"/> PBBs              | <input type="checkbox"/> Silica powder | <input type="checkbox"/> Vibration         |
| <input type="checkbox"/> Ammonia               | <input type="checkbox"/> Chlorinated naphthalenes | <input type="checkbox"/> Dichlorobenzene     | <input type="checkbox"/> Lead               | <input type="checkbox"/> PCBs              | <input type="checkbox"/> Solvents      | <input type="checkbox"/> Vinyl chloride    |
| <input type="checkbox"/> Arsenic               | <input type="checkbox"/> Chloroform               | <input type="checkbox"/> Ethylene dibromide  | <input type="checkbox"/> Manganese          | <input type="checkbox"/> Perchloroethylene | <input type="checkbox"/> Styrene       | <input type="checkbox"/> Welding fumes     |
| <input type="checkbox"/> Asbestos              | <input type="checkbox"/> Chloroprene              | <input type="checkbox"/> Ethylene dichloride | <input type="checkbox"/> Mercury            | <input type="checkbox"/> Pesticides        | <input type="checkbox"/> Talc          | <input type="checkbox"/> X-rays            |
| <input type="checkbox"/> Benzene               | <input type="checkbox"/> Halothane                | <input type="checkbox"/> Fiberglass          | <input type="checkbox"/> Methylene chloride | <input type="checkbox"/> Phenol            | <input type="checkbox"/> Toluene       |  |
|  |   |  |   | <input type="checkbox"/> Phosgene          | <input type="checkbox"/> TDI or MDI    |  |

If you have answered "yes" to any of the above, please describe your exposure on a separate sheet of paper.

IV. ENVIRONMENTAL HISTORY

1. Have you ever changed your residence or home because of a health problem? ..... No    Yes  
If so, please describe: \_\_\_\_\_
2. Do you live next door to or very near an industrial plant? ..... No    Yes  
If so, please describe: \_\_\_\_\_
3. Do you have a hobby or craft which you do at home? ..... No    Yes  
If so, please describe: \_\_\_\_\_
4. Does your spouse or any other household member have contact with dusts or chemicals at work or during leisure activities? ..... No    Yes  
If so, please describe: \_\_\_\_\_
5. Do you use pesticides around your home or garden? ..... No    Yes  
If so, please describe: \_\_\_\_\_
6. Which of the following do you have in your home? (Please check those that apply.)

- Air conditioner     Air purifier     Humidifier     Gas stove     Electric stove     Fireplace     Central heating

Use imprint card or complete

Date \_\_\_\_\_

Name \_\_\_\_\_

DOB \_\_\_\_\_

Clinic Number \_\_\_\_\_

Screening Occupational History  
Self-Administered

PRESENT JOB

- 1a. What do you do for a living? \_\_\_\_\_
- b. How long have you had this job? \_\_\_\_\_
- c. Describe the specific tasks this job involves: \_\_\_\_\_  
\_\_\_\_\_
- 2. Are you exposed to any of the following on your present job? Chemicals \_\_\_  
Vapors/Gases \_\_\_ Dusts \_\_\_ Metals \_\_\_ Extreme Heat or Cold \_\_\_ Loud  
Noise \_\_\_ Vibration \_\_\_ Radiation \_\_\_ Infectious agents \_\_\_ Stress \_\_\_
- 3. Do you feel you have any health problems related to your work? \_\_\_ Yes \_\_\_ No  
If yes, describe: \_\_\_\_\_  
\_\_\_\_\_
- 4. Do you use protective equipment on your job? \_\_\_ Yes \_\_\_ No If yes,  
describe: \_\_\_\_\_  
\_\_\_\_\_

ALL PAST WORK

5. Starting with your first job, please provide the following information:

Job Title	Years From - To	Description of Work	Exposures (see list above)	Injuries/Illnesses

OTHER EXPOSURES

- 6a. Do you have any hobbies that expose you to chemicals, metals, or other  
substances? \_\_\_ Yes \_\_\_ No
- b. Are other members of your household exposed to any of the substances listed  
in question 2? \_\_\_ Yes \_\_\_ No If yes, which ones: \_\_\_\_\_  
\_\_\_\_\_
- c. Do you live near any factories, dump sites, or other sources of pollution?  
\_\_\_ Yes \_\_\_ No If yes, describe: \_\_\_\_\_  
\_\_\_\_\_



7. Have you had pre-employment and periodic exams for hazard-related health problems? Yes \_\_\_\_\_ No \_\_\_\_\_
8. Have you been informed by your employer of any risks associated with your job? Yes \_\_\_\_\_ No \_\_\_\_\_

(If yes to either 7 or 8, please explain below; use back if necessary)

9. Have you been exposed to any of the following on your job?

Dusts	Yes _____	No _____	Don't Know _____
Solvents	Yes _____	No _____	Don't Know _____
Ionizing Radiation*	Yes _____	No _____	Don't Know _____
Non-ionizing radiation**	Yes _____	No _____	Don't Know _____
Vapors	Yes _____	No _____	Don't Know _____
Chemicals	Yes _____	No _____	Don't Know _____
Ultrasound	Yes _____	No _____	Don't Know _____
Fumes	Yes _____	No _____	Don't Know _____
Dangerous Machinery	Yes _____	No _____	Don't Know _____
Dangerous Equipment	Yes _____	No _____	Don't Know _____
Noise	Yes _____	No _____	Don't Know _____
Stress	Yes _____	No _____	Don't Know _____
Infectious Disease	Yes _____	No _____	Don't Know _____
Other _____	Yes _____	No _____	Don't Know _____

10. Are you provided personal protective devices on the job?  
Do you use them? Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know \_\_\_\_\_
11. Have you had any training about the nature of and protection from these work-related hazards?  
Before your job began? Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know \_\_\_\_\_  
Periodically, while you've worked? Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know \_\_\_\_\_
12. Where are your workclothes laundered? \_\_\_\_\_
13. Is there a union in your workplace?  
If so, which? Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know \_\_\_\_\_  
Do they have an active safety and health program?  
Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know \_\_\_\_\_
14. Is there a safety committee? Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know \_\_\_\_\_  
Do both labor and management participate on the committee?  
Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know \_\_\_\_\_
15. How many other workers are there in your place of employment? \_\_\_\_\_

\* X-ray, nuclear, isotopes, etc.

\*\* Microwaves, infra red, ultraviolet radiation, laser beams, etc.

16. Have you had any job-related illnesses or injuries?  
Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know \_\_\_\_\_

If so, describe: \_\_\_\_\_  
\_\_\_\_\_

17. Have fellow workers suffered job-related illnesses or injuries?  
Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know \_\_\_\_\_

If so, what kind? \_\_\_\_\_  
\_\_\_\_\_

18. Have you received compensation for job-related illnesses or injuries?  
Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know \_\_\_\_\_

If so, for what? \_\_\_\_\_  
\_\_\_\_\_

19. Have you received other disability payments for any job-related illnesses or injuries?  
Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know \_\_\_\_\_

If so, explain: \_\_\_\_\_  
\_\_\_\_\_

20. Have you any chronic health problems? (headaches, sinusitis, cough, etc?)  
Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know \_\_\_\_\_

If so, explain: \_\_\_\_\_  
\_\_\_\_\_

21. Have you had any of the following?

Miscarriages	Yes _____	No _____	Don't Know _____
Children with congenital anomalies	Yes _____	No _____	Don't Know _____
Infertility	Yes _____	No _____	Don't Know _____
Impotence	Yes _____	No _____	Don't Know _____
Menstrual disorders	Yes _____	No _____	Don't Know _____

22. Do you feel any of your chronic health problems are related to your past or present work?  
Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know \_\_\_\_\_

23. Have other workdrs in your place of work had similar problems?  
Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know \_\_\_\_\_

If so, how many? \_\_\_\_\_

24. Is there any relationship between your symptoms and your time at work?  
(e.g., are you better or worse over the weekend?) \_\_\_\_\_  
\_\_\_\_\_

25. Does your spouse work? Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know \_\_\_\_\_

If so, full-time? Part-time? \_\_\_\_\_

What is your spouse's occupation? \_\_\_\_\_  
\_\_\_\_\_

How long have you and your spouse been together? \_\_\_\_\_

As long as you have been together, what have the various jobs of your  
spouse been? \_\_\_\_\_  
\_\_\_\_\_

Were you aware of any hazardous exposures in relation to your spouse's  
employment? Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know \_\_\_\_\_

Have you lived with or been married to persons other than the individual  
mentioned above? Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know \_\_\_\_\_

If so, please answer the above questions regarding this (these) individ-  
ual(s).

26. Are there any industries or hazardous substances in the air near your  
home? Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know \_\_\_\_\_

If so, describe: \_\_\_\_\_  
\_\_\_\_\_

27. What are your hobbies?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

28. Do you use any chemicals or toxic substances with these hobbies?  
Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know \_\_\_\_\_

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