

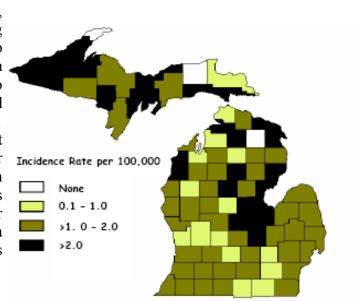
Excerpts from the 2006 Annual Reports

In this year's announcement of the availability of the latest Annual Reports, we are showing a few selected figures and tables from four of the reports. What can get lost in the statistics is the human story behind the numbers. The full reports include clinical histories that describe the individuals who have become sick or died from their work, as well as all the summary tables and figures.

2006 Annual Summary of Occupational Disease Reports to the Michigan Department Mesothelioma Among Michigan Residents, by County of Labor and Economic Growth

Despite the marked reduction of asbestos use, individuals number of developing mesothelioma in Michigan continues to increase each year. This is a trend being seen throughout the United States and is related to the long latency between first exposure and onset of disease (average 35-45 years). Figure 1 shows the parts of the state with the highest rates. Few of these individuals apply for workers' compensation despite the known association with asbestos. Exposure to asbestos in foundries and shipyards in the lower peninsula and mines in the upper peninsula explain much of the differences in rates between counties.

Figure 1. Average Annual Incidence Rates of



New Annual Reports

Asthma Fatalities Ages 2-34 in Michigan (2006*) Elevated Blood Lead Levels in Michigan (2006) Occupational Diseases in Michigan (2006)
Occupational Pesticide Illnesses and Injuries in Michigan (2006*)
Silicosis in Michigan (2006)
Work-Related Acute Traumatic Fatalities in Michigan (2006*)
Work-Related Asthma in Michigan (2006)

Work-Related Noise-Induced Hearing Loss in Michigan (2006*)

*Reports available in September

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Reports can be read or downloaded from our web site: www.oem.msu.edu (Annual Report link)

-or-

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2006 Annual Report on Work-Related Asthma in Michigan

The number of reports of work-related asthma in Michigan have remained relatively constant over the last 10 years, although there appears to have been a slight shift in the types of work-related asthma being submitted, more work-aggravated of pre-existing asthma and less from sensitization. The number of reports received continue to represent only a small percentage of the 63,000-97,500 Michigan residents estimated to have work-related asthma.

Number of Cases 200 164 150 127 120 **** 100 63 50 31 √9⁹Å ~9° ~9° ~9° ~9° ~0° ~0° Year Reported □ Occupational Asthma ■ Possible Occupational Asthma ■ Aggravated Asthma 12 RADS

Figure 2. Number of Confirmed Cases of Work-Related Asthma by Year and Type

2006 Annual Report on Silicosis in Michigan

In contrast to work-related asthma, the number of reports of silicosis continues to decrease. This is attributed to better working conditions and fewer exposed workers in foundries, the major source of silica exposure in Michigan. Given the long latency from first exposure to development of silicosis and the ongoing use of silica we expect to continue to see cases of silicosis into the future. Because of ongoing concern about the use of silica during abrasive (sand) blasting we have recontacted the abrasive blasters in the state to provide them information about alternatives to sand and ways to reduce exposure to silica if they continue to use sand as an abrasive. Our updated training manual on performing abrasive blasting is available on our web site (www.oem.msu.edu/blasting.asp).

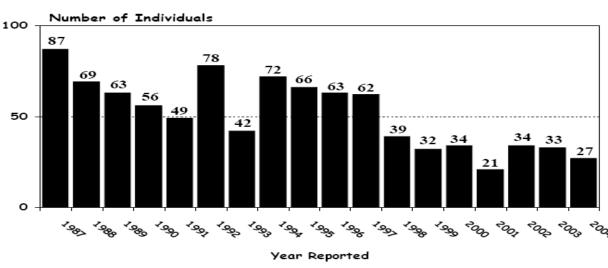


Figure 3. Number of Individuals Confirmed with Silicosis by Year Reported*

*Total number of individuals: 927.

2006 Annual Report on Blood Lead Levels on Adults and Children in Michigan

New guidelines for treating/managing elevated blood lead in adults has been published. A summary of the guidelines is shown below. Although such guidelines have been published for many years by CDC, this is the first time consensus guidelines for managing elevated lead in adults have been published.

Health-Based Management Recommendations for Lead-Exposed Adults

Blood lead level (µg/dL)	Short-term risks (lead exposure < 1 year)	Long-term risks (lead exposure ≥ 1 year)	Management
< 5	None documented	None documented	None indicated
5–9	Possible spontaneous abortion Possible postnatal developmental delay	Possible spontaneous abortion Possible postnatal developmental delay Possible hypertension and kidney dysfunction	Discuss health risks Reduce lead exposure for women who are or may become pregnant
10–19	Possible spontaneous abortion Possible postnatal developmental delay Reduced birth weight	Possible spontaneous abortion Reduced birth weight Possible postnatal developmental delay Hypertension and kidney dysfunction Possible subclinical neurocognitive deficits	As above for BLL 5–9 $\mu g/dL$, plus: Decrease lead exposure Increase biological monitoring Consider removal from lead exposure to avoid long-term risks if exposure control over an extended period does not decrease BLL < 10 $\mu g/dL$, or if medical condition present that increases risk with continued exposure
20–29	Possible spontaneous abortion Possible postnatal developmental delay Reduced birth weight	Possible spontaneous abortion Possible postnatal developmental delay Reduced birth weight Hypertension and kidney dysfunction Possible subclinical neurocognitive deficits	Remove from lead exposure if repeat BLL measured in 4 weeks remains $\geq 20~\mu\text{g/dL}$
30–39	Spontaneous abortion Possible postnatal developmental delay Reduced birth weight	Spontaneous abortion Reduced birth weight Possible postnatal developmental delay Hypertension and kidney dysfunction Possible neurocognitive deficits Possible nonspecific symptoms	Remove from lead exposure
40–79	Spontaneous abortion Reduced birth weight Possible postnatal developmental delay Nonspecific symptoms Neurocognitive deficits Sperm abnormalities	Spontaneous abortion Reduced birth weight Possible postnatal developmental delay Nonspecific symptoms Hypertension Kidney dysfunction/nephropathy Subclinical peripheral neuropathy Neurocognitive deficits Sperm abnormalities Anemia Colic Possible gout	Remove from lead exposure Refer for prompt medical evaluation Consider chelation therapy for BLL $>$ 50 $\mu g/dL$ with significant symptoms or signs of lead toxicity
≥ 80	Spontaneous abortion Reduced birth weight Possible postnatal developmental delay Nonspecific symptoms Neurocognitive deficits Encephalopathy Sperm abnormalities Anemia Colic	Spontaneous abortion Reduced birth weight Possible postnatal developmental delay Nonspecific symptoms Hypertension Nephropathy Peripheral neuropathy Neurocognitive deficits Sperm abnormalities Anemia Colic Gout	Remove from lead exposure Refer for immediate/urgent medical evaluation Probable chelation therapy

Kosnett M, Wedeen R, Rothenberg S, Hipkins K, Materna B, Schwartz B, Hu H, Woolf A. Recommendations for Medical Management of Adult Lead Exposure. Environmental Health Perspective 2007; 115: 463-471.



Michigan State University College of Human Medicine 117 West Fee Hall East Lansing, MI 48824-1316 Phone (517) 353-1846

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In this issue:

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 ${f S}$ Remember to report all cases of occupational disease!

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smailliW sbnsmA Francisco Terrazas Amy Krizek Lindsay Anderson Patient Interviewers: Ruth Vander Waals Тгасу Сагеу

Project SENSOR Office Staff: PS News, Editor

Project SENSOR NIHL Coordinator

Amy Sims, B.S.

Project SENSOR Coordinator

Mary Jo Reilly, M.S.

Project SENSOR, Co-Director Professor of Medicine Kenneth D. Rosenman, M.D.

College of Human Medicine

At Michigan State University-

Project SENSOR Specialist Byron Panasuk, C.I.H., C.S.P. John Peck, M.S., Director MTS Division Project SENSOR, Co-Director Douglas J. Kalinowski, Director MIOSHA

(VHSOIW) noitery & Health Administration At the Michigan Occupational

Project SENSOR Staff

Edward Zoratti, M.D. AFL-CIO, Medical Advisor Center for Occ. and Env. Medicine Michael Harbut, M.D., M.P.H. President, Michigan Thoracic Society James Chauncey, M.D. Wayne State University

East Lansing, MI 48824-1316

II7 West Fee Hall

MSU-CHM

9481-858 (712)

Health and is available at no cost. Suggestions

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Division of Occupational Medicine

Thomas G. Robins, M.P.H.

President, Michigan Allergy and

and comments are welcome.

School of Public Health University of Michigan

Asthma Society

James Blessman, M.D., M.P.H. Medical Association

Representative, Michigan Occupational John J. Bernick, M.D., Ph.D.

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