

PREPARATION FOR DEFENSE OF OCCUPATIONAL DISEASE/EXPOSURE CLAIMS

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Current Issues and What's Next?

◎ Claims for overexposure to metallic elements?

Welding fumes

Manganese

Hexavalent Chromium

Lead Issues

Others?

Parkinson's

Parkinsonism

Cancer

Systemic/Hematologic

Respiratory?

Normal & Lethal Doses of Common Substances

Substance	Normal Dose	Lethal Dose
Water	1 ½ quart	15 quarts
Aspirin (salicylic acid)	2 tablets	90 tablets
Beer (ethyl alcohol)	1 beer	33 beers
Salt (sodium chloride)	3 tsp.	60 tsp.
Lima beans (cyanide per serving)	1.18 mg.	106 mg.

Risk Assessment

Process of determining whether a chemical will produce harm under specific conditions of exposure.

Safety: Reciprocal of Risk

The probability that a chemical will not produce harm under specified conditions of exposure.

Prima Facie Case Presumption

In order to receive an award of benefits, under the Longshore Act, the Claimant must establish that he has sustained some harm or pain that could have been caused by conditions at work or by an accident that could have caused the harm or pain. This is what constitutes a *prima facie* case of fact of injury. *Kelaita v. Triple A Machine Shop*, 15 BRB 326 (1981). It is only once this *prima facie* case is established, that the presumption of compensability comes into play.

Presumption § 920

- (a) That the claim comes within the provisions of this Act.
- (b) That sufficient notice of such claim has been given.
- (c) That the injury was not occasioned solely by the intoxication of the injured employee.
- (d) That the injury was not occasioned by the willful intension of the injured employee to injury of kill himself or another.

Rebut Presumption

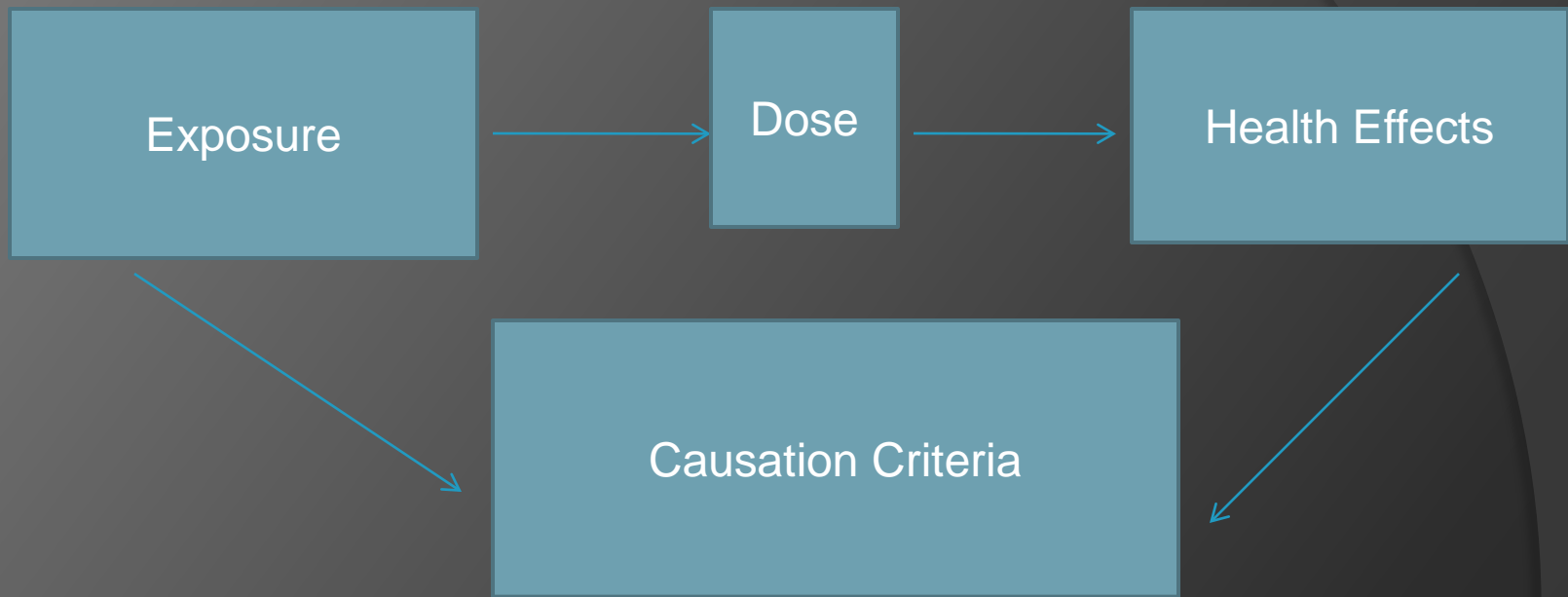
- #1 The Law is clear that the presumption is overcome with the introduction of substantial evidence of non-causation. *Sprague v. Director, OWCP*, 688 F.2d 863, 865 (1st Cir., 1982). Substantial evidence is defined as “such relevant evidence as a reasonable mind might accept to support a conclusion.” *Id.* at 865. This means “reasonable probabilities.” *Bath Iron Works Corp. v. Director, OWCP (Shorette)*, 109 F.3d 53, 56 (1st Cir. 1997)

Rebut Presumption

#2 The First Circuit has held that the employer's burden is not to rule out any possible causal relationship between the claimant's employment and his condition; rather, the Employer needs only to submit substantial evidence to show that there is probably no causal connection. *Id.* The First Circuit has specifically stated that, to provide otherwise, would "go far beyond the substantial evidence standard set forth in" §920(a). *Id.*

Burden of Proof

If the Employer rebuts the presumption, it no longer controls and the record as a whole must be evaluation to determine the issue of causation. *Del Vecchio v. Bowers*, 296 U.S. 280 (1935). In fact, once rebutted, the presumption itself passes completely out of the case and the issue of causation is determined by examining the record “as a whole.” *Holmes v. Universal Maritime Services Corp.* 28 BRBS 18 (1995). The Claimant bears the burden of proving causation by a preponderance of the evidence after the presumption is rebutted. *Director, OWCP v. Greenwich Collieries*, 512 U.S. 267 (1994).



- A. Exposure and dose
- B. Literature precedence
- C. Confounder analysis
- D. Temporality
- E. Biological plausibility and consistency

- ⦿ Has the patient been exposed to the chemical?
- ⦿ Has the exposure resulted in a dose?
- ⦿ Is the dose sufficient to cause an effect?
- ⦿ Is the effect consistent with the chemical's known effects?
- ⦿ Is there objective medical evidence demonstrating a disease or illness?
- ⦿ Is the onset of the disease temporally related to the exposure?
- ⦿ Is the effect biologically plausible?
- ⦿ Have all other confounding or contributing factors been considered or eliminated?

Occupational History

- The patient's complaints and symptoms and their relation to work, past or present
- Identifying and characterizing workplace hazards
- The quantity and duration of exposure
- Whether co-workers with similar jobs have similar complaints, symptoms, or illness

Claimant's History

- Review Depositions

 - Exposure history?

 - Environmental conditions?

 - Engineering controls?

 - Personal protective equipment?

 - Respiratory protection?

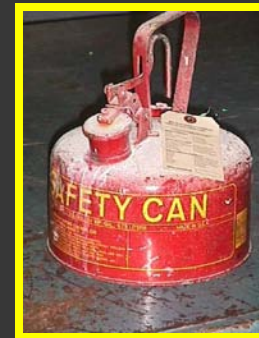
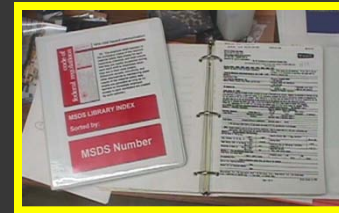
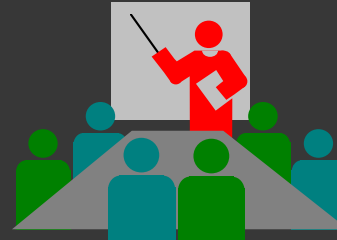
 - Other exposure sources?

Approach

- ⦿ Hazard Communication program
- ⦿ Documented exposure measurements
- ⦿ Established policies for protection

Hazard Communication

- Documentation that a claimant has received hazard communication training.
- Understanding that MSDS's are available.
- Understanding where to get information on hazardous materials.
- Understanding that hazardous materials are labeled with hazard warning information.



Industrial Hygiene

- ⦿ Demonstrate that an Industrial Hygiene program is in place.
- ⦿ Materials and processes are evaluated
- ⦿ Exposures are documented



Hazard Evaluations



Providing Evidence

Do your safety and health policies include recognition of exposure standards that may be lower than the OSHA Permissible Exposure Limits?

The Law



OSHA

Government Recommendations



Professional Guidelines



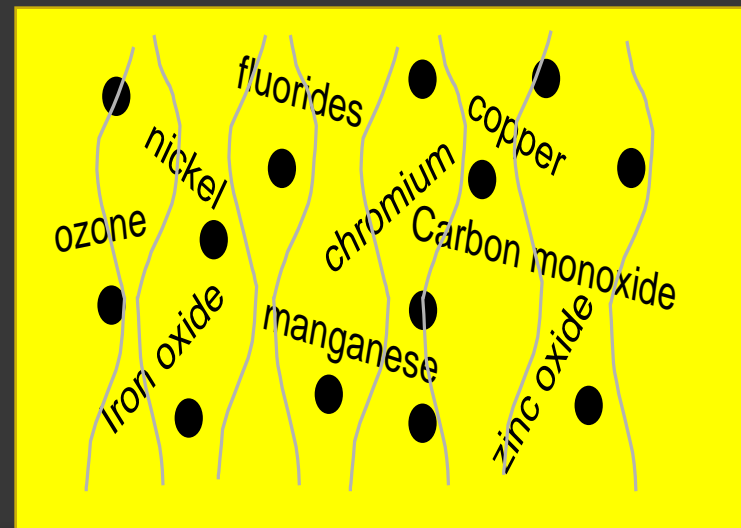
Engineering Controls

- Describe what is in place
- General exhaust
- Local exhaust
- How they affect exposure levels



Historical Exposure Data?

- Old standards for acceptable welding fume exposures called for total fume sampling.
- Gravimetric methods
- OSHA: 5 mg/m³ TWA8
- Not specific to individual metallic elements



Total vs. Specific Elements



old



mg of total fume particulate

new



ug of manganese fume

ug of iron oxide fume

ug of zinc oxide fume

Etc...

Historical Exposure Data

- Is the old data still useful?
- Determine % content in steel and welding consumable
 - Steel and wire specifications
 - Material Safety Data Sheets
 - Welding Engineers

Historical Exposure Data

- Example: Estimating manganese by factoring in the % content.

$$\begin{array}{lll} \text{Total fume concentration} & \text{\% Manganese in wire/steel} & \text{Estimated manganese concentration} \\ 2 \text{ mg/m}^3 & \times 0.7\% \text{ Mn} & = 0.014 \text{ mg/m}^3 \end{array}$$

General Causation

There must be scientifically reliable evidence of general causation.

Is there published evidence that a certain level of exposure is capable of causing the conditions that are claimed?

Specific Causation

There must be scientifically reliable evidence of specific causation.

Is there evidence that the levels of exposure in Company X caused employee X's condition?

Accepted Principles of Toxicology

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Accepted Principles of Toxicology

Opinions must be based on reliable evidence that:

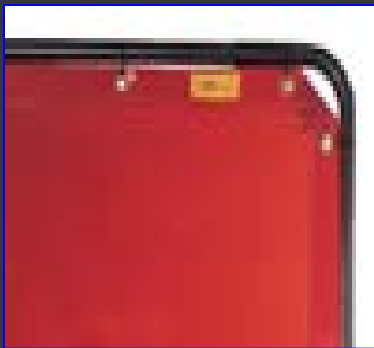
1. there were harmful amounts of chemicals in the workplace or environment.
2. that employee X was exposed to harmful amounts of chemicals.

Accepted Principles of Toxicology

Opinions must be based on reliable evidence that:

3. that the dose and duration of the exposure was sufficient to cause the specific medical condition.
4. that Employee X's specific medical condition resulted from exposure to the agent.

Policies for Protection



Non-Occupational Exposure?

