



# Lead and its Impacts on Workers During Renovations

CM598: Data-Driven Health and Safety for Construction

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# 1. Work Description

## Concern

Many residential homes in the United States were built prior to the 1980s and the paint used for these homes contain lead. During renovation, workers are exposed to lead as they scrap the old paint which spreads lead into the air, making it inevitable for workers to inhale or digest it accidentally.

# 1. Work Description

## **National Occupational Research Agenda (NORA)**

The National Occupational Research Agenda (NORA) indicates that the awareness of health hazards from lead or silica is much lower than injury hazards awareness among construction workers. The reason is that lead exposure is hard to recognize unless a testing or an awareness training has been made.

# 1. Work Description

## Health Impacts

- Anemia
- Weakness
- Kidney Damage
- Brain Damage



## 2. Hazard Description

### Impacted Trades

- Painters
- Carpenters
- General Laborers

## 2. Hazard Description

### Exposure Measuring

- OSHA PEL is 50 MG/Cubic Meter
- Time Weighted Average (TWA) = 8 Hours (Full-Time)
- Higher concentration = Less TWA

## 2. Hazard Description

### Hazard Monitoring and Tracking

- Annual Workers' Screening Program
- Daily Job Site Inspection



# 3. Controls Description

## Effective Controls

- Engineering Controls (Wet Method)
- Administrative Controls (NAM-Reducing shift hours)
- PPE (Respirators)

# 3. Controls Description

## Controls Efficiency

- Enforcement of using wet method
- NAM is used Regularly and properly
- Daily Training on wearing PPE



Thank you