

Worker Health Programs That Prevent Problems and Costs

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What do YOU think
Industrial Hygiene is?

Agenda

1. What is Industrial Hygiene (IH)?
2. How IH can protect employees
3. IH Assessments
4. IH fit in an OEHS program

What is Industrial Hygiene?

- A science and art devoted to the anticipation, recognition, evaluation, control, and confirmation of protection from those environmental factors stresses arising in or from the workplace which may cause sickness, impaired health and well being, or significant discomfort among workers or among citizens of the community.¹
- A science concerned with the protection and improvement of the health and well-being of workers in their vocational environment. ²
- Is concerned with identifying, evaluating, and controlling real or potential workplace environmental stressors or hazards that can affect the wellbeing of workers and community members ³

What is Industrial Hygiene?

**Scientists and engineers
dedicated to improving the
health and safety of workplaces
and communities.**

What is Industrial Hygiene?



What is Industrial Hygiene?



What is Industrial Hygiene?

5 General Hazard Classes:

Chemical

- Gases, vapors, dusts, fumes, mists, and smoke

Physical

- Nonionizing and ionizing radiation, noise, vibration, extreme temperatures and pressures

Ergonomic

- Workstation design, repetitive motion, improper lifting/reaching, poor visual conditions

Biological

- Insects, mold, yeast, fungi, bacteria, and viruses

Psychosocial

- Occupational stress, shift work, workplace violence/harassment, poor leadership, behavioral/mental disorders

What is Industrial Hygiene

What types of hazards do you see here?



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Why is Industrial Hygiene Important?

US BLS Injury/Illness Data –

- Exposure to harmful substances or environments:
 - 820 fatalities (2023 – 16% of total)
 - Over 630,000 nonfatal injuries/illnesses (2021/22 - 22% of total)
- Overexertion, Repetitive Motion, Bodily Condition:
 - 6 fatalities (2023)
 - Over 520,000 nonfatal injuries/illnesses (2021/22 – 19% of total)

How does Industrial Hygiene help You?

Data Driven Analysis

What *is* happening vs.
what we *think* may be happening

Compliance initiatives

OSHA regulations,
Occupational Exposure Limits

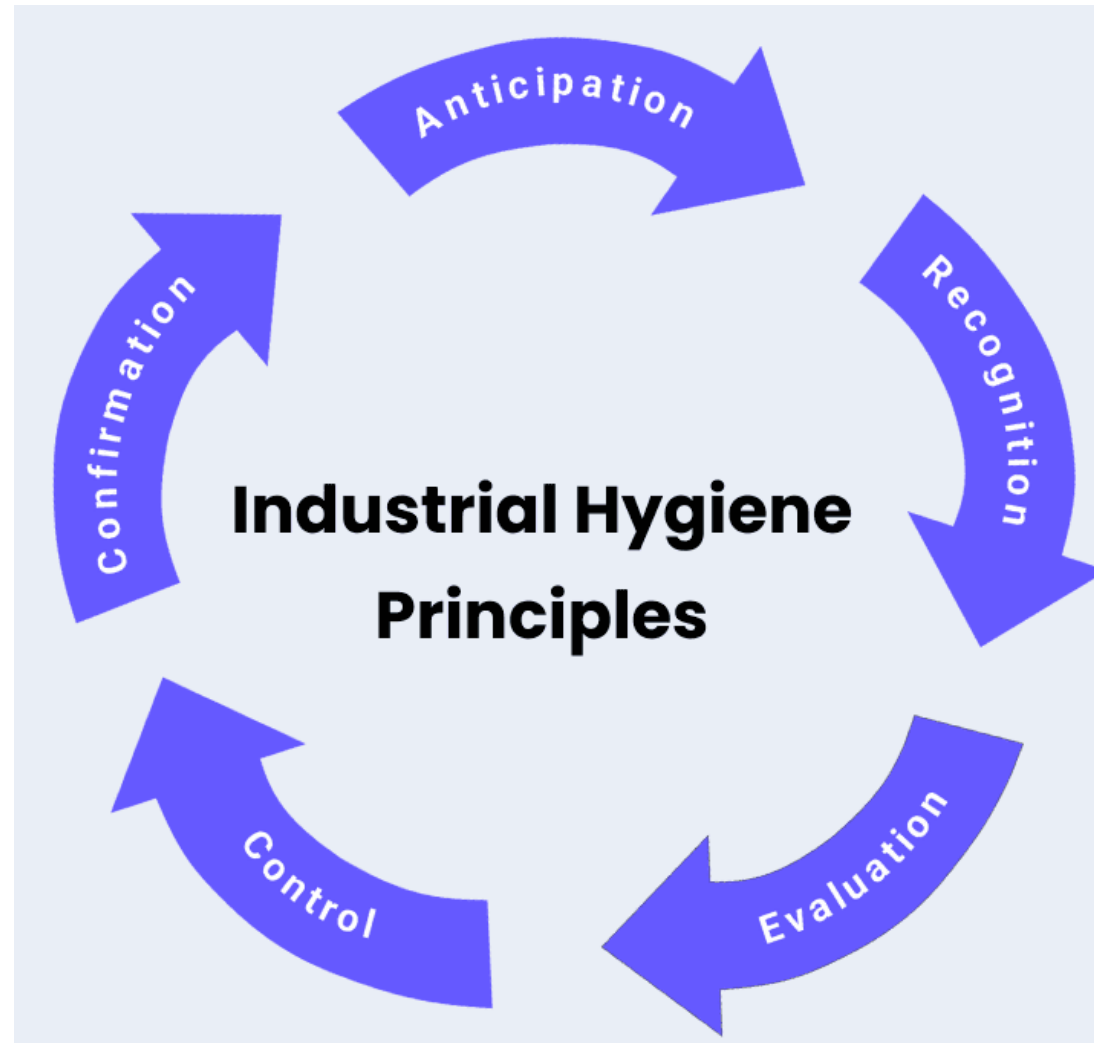
Contributes to positive employee
experiences

Comfort = Productivity =
Operational Improvement = \$\$\$

Investigative Tool

Can help find the hidden /
non-obvious hazards

IH Assessments




IH Assessments

What do they include?

- Risk Assessments
 - Qualitative Assessments
 - Quantitative Assessments
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- ***NOTE:** Ergonomic Assessments has different format for evaluation and are not included in this discussion


IH Assessments

Risk Assessments → walk - through!

- aka Hazard Evaluation
 - Review of workplace operations for IH-related hazards
 - Need to include non-regular tasks, shifts, seasonal impacts, etc.
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- Noise
 - Chemicals/Carcinogens
 - Vibration
 - Hot/Cold Environments
 - Dusts
 - Fumes
 - Radiation
 - Fungi
 - Air quality


IH Assessments

Qualitative Assessments → Questions!

- Completed after a Risk Assessment but before sampling is completed
 - Helps further identify exposures to be evaluated
 - Need to determine acceptable risk levels for your company
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- Operation / job / task
 - Number of employees exposed (Similar Exposure Group)
 - Length of shift
 - Length of exposure
 - Length of time in that job
 - Controls in place (engineering, admin, PPE)
 - Severity of health effects

IH Assessments

Quantitative Assessments → data & instruments!

- Monitoring exposures to collect data
 - Instrumentation is needed based on exposure
 - Samples are analyzed by an accredited laboratory
 - Results compared to Occupational Exposure Levels (OELs)
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- Noise dosimeters
 - Air sampling pumps and media
 - Sampling wipes
 - Radiation detector / Geiger counter
 - Vibration meters
 - Fungi sampling tools

Considering the importance and inclusion of Industrial Hygiene, will lead to improved OEHS programs, operational production, and employee morale.

Thank you!

Questions?

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