



Annual Workplace Safety and Health Conference



Juler Group Incorporated

Managing Risk in the Workplace



Our Senses Are Amazing

- Seeing
 - 120 M Rods (darkness) & 7 M Cones (RGB)
- Hearing
 - Pitch (frequency, wavelength, Hz)
 - Intensity (energy, volume, dB)
 - Direction & Distance
- Smelling
 - 1 Trillion distinct scents
- Tasting
 - Taste bud + brain cell + smell = taste
- Touching
 - Stretch + pressure sensors



What Happens?

- When we lose a sense such as hearing
 - Our ability to communicate is dramatically impaired
 - Our sense of balance may be impaired - falling
 - We lose the ability to distinguish pitch, intensity, distance
 - We cannot hear a whisper, a breath, a hot rod
 - We isolate from conversations
 - We avoid parties and gatherings with background noise
 - We avoid _____
 - We may suffer discrimination
 - We lose richness and context of our world



What Happens?

- When hearing deprived people speak?
 - “I would rather lose my sight - REALLY”
 - “I am embarrassed”
 - “I have to twist my head to my good ear”
 - “I nod and agree without knowing what I agreed to”
 - “Many times I just smile and walk away”
 - “I leave work early everyday – but only by 10 minutes”
 - “I believe my manager discriminates against me”
 - “My colleagues do not include me”
 - “To me it’s a hole of darkness”



7 Dirty Secrets

*Hazardous Noise
Is a Business Liability*

Agenda

- The Legal Case – OSHA Regulations
- The Business Case – **7 Dirty Secrets**
- The Solution
- The Noise Problem at Work
- Noise Assessment
- Hearing Conservation Program
- Going Beyond – Best Practice



The Legal Case OSHA Worker's Compensation



The Noise Problem

• #1 Occupational illness

• #2 in its category



\$1,558,661 in Penalties 2015



Regulations

- 29 CFR 1910.95
 - 8-hour Time Weighted Average (TWA)
 - Continuous and Impulsive
 - Action Level 85dBA – must take action!
 - AL triggers Hearing Conservation Program (HCP)
 - Hearing protection readily available
 - Training & Education essential and ongoing
 - Audiometric Test Program essential and ongoing
 - Noise monitoring essential and ongoing
 - Corrective actions;
 - (1°) engineering controls,
 - (2°) administrative controls,
 - (3°) is hearing protection.



Occupational Injury

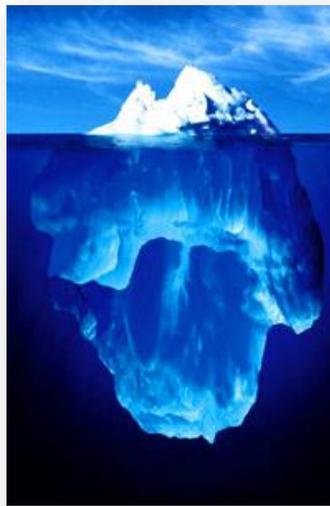
- Physiological
 - Permanent hearing loss
 - Temporary hearing loss
 - Tinnitus (i.e. ringing in ears)
 - Meniere's disease

OSHA says

"If an employer aggravates an existing condition – they own it!"



The Business Case Total Cost of Noise



Dirty Origins

- Physiological and Health
 - Confusion
 - Nervousness
 - Irritability and Anger
 - Fatigue and stress
 - Vision changes
 - Interference with speech
 - Insomnia – Sleep loss
 - Hypersensitivity



Our body enters human stress response of fight or flight.



Dirty Secrets

- Productivity & Efficiency Losses
 - Chronic fatigue
 - Less personal energy
 - Poorer cognitive function
 - Reduced Hand-Eye coordination
 - Reduced concentration
 - Reduced Memory function
 - Reduced Attention Span
 - **Decreased output**

In the Reals –
Pump Test
operation



Dirty Secrets

- Total Quality Loss
 - Heightened state of confusion
 - Inability to follow verbal directions
 - Inability to follow written procedures
 - Inability to work within company framework
 - Reduced ability to see workmanship
 - **Increased on-the-job errors**
 - **Increased error rate**



Dirty Secrets

- Title IX Harassment
 - The “fight” mode
 - Upsetting, disturbing and threatening behaviors
 - Bullying and mobbing
 - Aggressive behavior
 - Employees with NIHL may be discriminated against
 - By colleagues and management
 - **Increased absenteeism**
 - **Diminished morale**
 - **Decreased productivity**



Dirty Secrets

- Poor Teamwork
 - Inability to work within policies/procedures
 - Inability to work in teams or motivate colleagues
- Seclusion (“Flight” mode)
 - Avoiding teams & tasks
 - Extended breaks
 - **Decreased cooperation**
 - **Decreased output**



Dirty Secrets

- Low Morale & High Turnover
 - Sense of failure and angst
- Lost Work Days
 - Health issues
 - Absenteeism
 - Disciplinary actions
 - Dissatisfaction with the job

In the Reals –
Glass bottling
operation



Total Cost to the Business

- \$250,000 Title IX Lawsuit Settlement
- \$50,000 Worker's Compensation Settlement
- 9 percent of wages for absences
- 150 percent of wages for morale and turnover
- 15 percent rework, repairs, customer complaints



The Solutions Total Cost of Noise



Noise Assessment

- Monitoring is required
 - 1910.95/1926.52 plus General Duty Clause
 - Establish SEG or Work Area
 - Production or process changes
 - Controls changed
 - Employee complaint
 - Time goes by
- Temporary employees are included
- Employees entitled to observe procedure
- Employees entitled to view results



Noise at Work



At Least He's in the Shade

94.3 dBA for 9 hours

No HPD



Elements of an HCP

1. Establish written Corporate Policy
2. Designate HCP Program Manager
3. Write detailed site-specific Standard Working/Operating Procedures
4. Perform Periodic Noise Surveys and Personal Noise Dosimetry
5. Develop high noise area summary and/or hazard map
6. Communicate Noise Survey/Dosimetry results with employees
7. Provide and FIT a choice of Hearing Protection Devices
8. Implement engineering and/or administrative controls
9. Administer audiometric testing program with annual Hearing Test
10. Hazard Communications – hearing test results and area postings
11. Schedule classes to educate and motivate employees
12. Provide accurate and complete recordkeeping
13. Establish and schedule a “uniformly enforced compliance program”
14. Perform Annual Program Evaluation/Audit

In the Reals –
Gears HCP



Going Beyond - Best Practice

In the Reals –
HCP rollout USA

- Safety Leadership
 - Communicate with management
 - Ally and partner with management
 - Make coalitions with management
 - Have a working knowledge of the law and its enforcement
 - Be consistent
 - Combat complacency with incessant communication

Drop the “I’m not respected; it’s the law” attitude.



Going Beyond – Best Practice

- Make noise “visible”
 - Periodic noise surveys and personal dosimetry
 - Communicate monitoring results regularly
 - Post noise maps in common areas
 - Post decibel levels on equipment
 - Post hazard control posters in work areas
 - Install active sound sign
 - Stickers on hard hats indicating make/model of FIT tested HPD for that individual



Going Beyond – Best Practice

- Hearing Protection
 - A choice of HPD
 - HPD Fit test
 - HPD dispensers all around plant
 - One-on-one training
 - Proper NRR calculations
- Audiometric Test Results
 - Identify baselines that are abnormal immediately
 - High hazard area: hearing test in middle or end of shift to see temporary threshold shifts instead of normal 14 hours quiet prior to hearing test



Going Beyond - Best Practice

- Training for employees to include
 - Noise Hazard Assessment
 - Noise Hazard Exposure Prevention
 - Use of HPD
 - Audiogram
 - Consequences
- Train Individuals
 - One-on-One
 - Document proof of use and care of HPD



