Injuries Caused When Struck by a Person or Object
Injuries - Struck By or Against

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Global Senior Manager EHS
A.M. Castle & Co.
EHS Philosophies

“Sal - osophies”
Struck By or Against injuries are the most under rated workplace and off the job injury category.

Many are fatal

Many are life threatening

Many incidents deliver serious injuries

Many occur with serious property damage
The Numbers are Staggering

According to the National Safety Council (NSC) Injury Facts (2010 Edition) Struck By/Against Injuries:

- 2nd leading cause of non-fatal unintentional injuries
- Leading cause in the 15-24 year old age group
- 4th leading cause of days away from work cases
- 4th leading cause of work related deaths
- Odds of dying on the job by Struck B/A 1 in 1400
Potential Injury Opportunities?

**Struck By:** car, truck, bus, train, boat, golf cart, Golf club, forklift, crane, mobile platform, Bicycle, tire, flying piece of X, garage door, Door opening, rock, another person, mail carrier, Farm equipment, falling objects, motorcycle, Stock items, batted ball, lawn mower, scaffolding, Pressurized hose, hammer head, etc.....

**Struck Against:** car door, piece of protruding X, wall, door, flower pot, office equipment, ladders, Piping, hoses, machinery, fencing, etc.....
Some of the Causes?

Distractions (on & off the road)
   cell phone, texting, laptops, TV, I-pod, I-pad
Inattention to job surroundings
Opening the door
Open office equipment (desk/cabinet drawers)
Standing up at desk or work station
Do WE want Struck By/Against Incidents?

Proactive

Undesired Event

Reactive
Controls

- Workplace assessments
- Job Safety Analysis
- Hazard recognition
- Incident Investigation (near miss reporting)
- Behavioral safety process
- Warning devices (audio, visual)
- Preventive Maintenance programs
Controls

- Housekeeping standards
- Maintain regulatory compliance
- Policies & procedures (workplace violence)
- Job skills training (certifications)
- Workplace design (engineering)
Outline of EHS Process

- Management Commitment & Support
- Assignment of Responsibility, Authority & Accountability
- Maintenance of Safe & Environmentally Sound Working Conditions
- Training & Orientation
- Incident Reporting, Analysis & Record
- Emergency Programs & Procedures
- Acceptance of Personal Accountability
Assessments, Audits & Evaluations

- Meeting the Needs of the Organization
- Self-Assessments
- Third Party Assessments
- Reports and Follow-up
- Regulatory Assessments
Job Safety Analysis

A system for the development and use of safe job methods to:

• identify and control unsafe job practices before they result in injury/damage

• detect hazardous conditions that can be controlled/eliminated through job modification or engineering controls
Job Safety Analysis

Everyone involved in the process
  Department Supervisor - develop
  Employees - develop
  Department Head - approve

One master copy set of JSA’s

Reviewed and/or updated at least every 18 months
# Job Safety/Hazard Analysis

## Job:

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<th>Date</th>
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<tr>
<th>Title of Employee Who Does Job:</th>
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<tr>
<td>Responsible Supervisor:</td>
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<td>Author #1 Signature:</td>
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<th>Department:</th>
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<tr>
<td>Section:</td>
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<td>Author #2 Signature:</td>
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<table>
<thead>
<tr>
<th>Required And/Or Recommended Personal Protective Equipment:</th>
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<td>Approved By:</td>
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<td>Signature:</td>
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## Sequence of Basic Job Steps | Potential Injuries or Hazards | Recommended Safe Job Procedure

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Job Safety Analysis

New employee orientation
Educate current employees in job hazards
Incident Investigation tool

Foster employee participation!!
Hazard Recognition, Evaluation & Control

• **Hazard Recognition**
  - Job Safety Analysis
  - Safety & Health Inspections
  - Incident Investigations/Reviews

• **Evaluations**
  - Material Safety Data Sheets (MSDS)
  - Industrial Hygiene Exposure Assessment
  - Systems Safety Reviews

• **Hazard Control**
  - Engineering Controls & Redesign
  - Permits
  - Preventive Maintenance
  - Personal Protective Equipment (PPE)
Proactive tools for maintaining safe working conditions

- Pre-Startup Safety Reviews
- IH exposure assessment
- Housekeeping inspections
- Corrective Action Systems
- Management of Change
- Project reviews

- Design concepts
- Operating procedures
- Safe work practices
- Safety & Health procedures
- Procurement guidelines
- Mechanical integrity
Workplace Design & Engineering

• Design and Start-up Review
• Ergonomic Factors/ Material Handling
• Machine Safeguards
• Life Safety Code and Fire Prevention
• Flow Diagrams/P&ID’s
• Instrumentation and Control
• Overpressure Protection
• Loss Prevention Aspects

“You never know where you’re going ‘til you get there.”
Sylvester the Cat
Acceptance of Personal Accountability

• Accountability (PPE, Procedures, Safety Rules)
• Ability to Participate
• Observation Programs
• Safety and Health Committees
• Safety Suggestions
• Housekeeping

“We are what we repeatedly do. Excellence then is not an act, but a habit.”
Aristotle
Acceptance of Personal Accountability

Managers or Supervisors Role:

**Maintain** - acceptance of personal accountability in those who inherently bring safe behavior to the job

**Enhance** - acceptance of personal accountability in those who allow other priorities to compromise safe behavior

**Develop** - acceptance of personal accountability in those who demonstrate unsafe behavior and continually demonstrate a lack of safety awareness
Acceptance of Personal Accountability

Supervisor’s Functions

Establish work methods
Give job instructions
Assign people to jobs
Supervise people (direct and correct)
Maintain equipment and work place

All while emphasizing SAFETY!
Acceptance of Personal Accountability

Leadership Skills

Ability to organize and direct activities of others
Human behavior (self and others)
Leadership (changing face-to-face situations)
Emotional control (stress)
Practical decision-making (goals based on intelligence)
Acceptance of Personal Accountability

A - Attitude
B - Behavior
C - Commitment
Barriers to Safe Work

Direct Causes
- Severe Fatigue
- Illness
- Intense or Prolonged Stress
- Alcohol/Drug Use

Indirect Causes
- Workplace Stressors
  - Shift Schedule
  - Interpersonal Conflicts
  - Role Conflicts
  - Production Schedules
  - Cultural Change
  - Unclear Policies
- Individual Stressors
  - Family Conflict
  - Financial Problems
  - Reaction To Change
  - Personality Factors
Analysis & Correction

- Incident Type
  - Struck by, against
  - Slip or trip w/o fall
  - Fall from elevation
  - Fall from same level
  - Caught in, under, between
  - Overexertion, strain
  - Transportation
  - Drowning, buried
  - Explosion, implosion

- Contact by
  - Chemicals
  - Electricity
  - Temperature extremes
  - Noise
  - Radiation
  - Animal, insect, plants
## Analysis & Correction

<table>
<thead>
<tr>
<th>Personal Factors</th>
<th>Job Factors</th>
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<tr>
<td>Lack of knowledge/skill</td>
<td>Inadequate Leadership</td>
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<tr>
<td>Stress</td>
<td>“ Engineering</td>
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<tr>
<td>Inadequate capabilities</td>
<td>“ Maintenance</td>
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<td>Improper motivation</td>
<td>“ Equipment</td>
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<td></td>
<td>“ Standards</td>
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<td></td>
<td>Abuse or misuse</td>
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<td>Wear &amp; tear</td>
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Analysis & Correction

• Unsafe Behaviors
  Failure to
  Operating without
  Improper
  Using defective
  Making inoperable

• Unsafe Conditions
  Inadequate
  Defective
  Hazards
  Exposure
  Extremes
You never get a second chance to make a good first impression.
New Employee Orientation

Set aside appropriate amount of time

Know what EHS training the person has and needs forklift, mobile platform, etc.

Stress how important the EHS process is to you and the organization
New Employee Orientation

- General Safety Rules
- EHS Policy
- EHS Process
- Safety Manual
- Hearing Conservation
- Housekeeping
- Incident Reporting
- Safety meetings
- Reporting hazards
- Emergency procedures
- Shift work
- Heat/cold stress
- Safety committee
- PPE - glasses Rx
- Hazard Communications
- Equipment specific
Attitudes that increase injuries

- **Apathy**
  "Who cares?" approach to their safety

- **Carelessness**
  Follow safety haphazardly or not at all

- **Complacency**
  I’ve never been hurt before on the job

- **Defiance**
  Purposely ignore rules & refuse work safely

- **Emotion**
  Excessive anger/overly upset

- **Ignorance**
  What you don’t know can hurt you

- **Negligence**
  Housekeeping, equipment in good repair

- **Tiredness**
  Slows reactions/lowers power of concentration
Why employees do not report incidents

- Fear of discipline
- Concern about record/reputation
- Fear/dislike of medical treatment
- Avoidance of red tape
- Poor understanding of importance
Employee Participation

- Site safety committees
- Program development
- Off the job safety
- Training
Safety Committees

Basic Objectives:

• Reduce incidence of injuries in workplace
• Improve safety in the work environment
• provide a means for communication about safety
Employees accept personal accountability for safety when they react safely and effectively in the presence of a hazard.

Key to the success of any safety process