



Risk, Health, and Safety for All Conference
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**Risk Assessment;
Acceptable Risk?**

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WisCon Program 1

Dying of Workplace Conditions



❖ Injuries

- 5,000 / year
- 20 per work day (5 days/week)
- 2-3 per work hour (8 hours/day)
- Every 24 minutes of the workday




❖ Illnesses

- 50,000 / year
- 137 / day (7 days/week)
- 6 / hour (24 hours/day)
- Every 10 minutes (24/7/365)

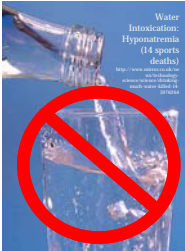
WisCon Program 2

Hazards
anything that can cause harm ...

Hazardous Chemical?



Non Hazardous Chemical?



Water Intoxication: Hyponatremia (14 sports deaths)
<http://www.wisconsin.gov>
www.wisconsin.gov
www.wisconsin.gov
www.wisconsin.gov

WisCon Program 3

Types of Hazards

Personal Injury
Sudden
Always Present

Process (Catastrophic)
Sudden
Not Always Present
Deadly

Illness (Health)
Accumulation
Over Time

Festus, MO, Fox News 2

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Hazard and Risk

The Risk Changed

Did the Hazard Change?

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Hazard and Risk

Hazard
Anything that can cause harm

Exposure
Contact with the Hazard


RISK
How Likely to get hurt
How badly hurt

Is the Risk ACCEPTABLE?

YES NO

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What Makes Risk Acceptable?



34 deaths 11 / 100,000 Firefighters	5,147 deaths / 146 M 4 / 100,000 All Workers
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3 X
"average"

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Acceptable to Who?



Culturally Acceptable

Personally Acceptable

Legally Acceptable

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What Makes Risk Acceptable?

Risk Vs Benefit

Perception of Risk

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Risk Perception - Outrage

"Safe"	"Risky"
Voluntary --- Coerced	
Natural --- Industrial	
Individually controlled --- Controlled by others	
Fair --- Unfair	
Responsive process --- Unresponsive process	
Morally irrelevant --- Morally relevant	
Familiar --- Exotic	
Not memorable --- Memorable	
Not dreaded --- Dreaded	
Chronic --- Catastrophic	
Knowable --- Unknowable	
Trustworthy sources --- Untrustworthy sources	

12 "outrage factors" described by Peter Sandman derived from the psychometric risk model of Paul Slovic, see "Risk Communication: Facing Public Outrage," from the U.S. EPA Journal, 1987, at: <http://www.pisandman.com/articles/facing.htm>

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What Makes Risk Acceptable?



1 death
per 50 billion passenger miles

https://en.wikipedia.org/wiki/Aviation_safety

<https://photoay.com/photos/aircraft-jet-jet-phrase-sky-flying-802216/>

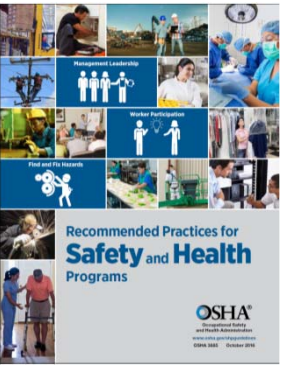


750 deaths
per 50 billion passenger miles

<https://photoay.com/photos/road-car-mercedes-vehicle-auto-1610359/>

WisCon Program 14


- MANAGEMENT LEADERSHIP
- WORKER PARTICIPATION
- HAZARD IDENTIFICATION & ASSESSMENT
- HAZARD PREVENTION & CONTROL
- EDUCATION & TRAINING
- PROGRAM EVALUATION & IMPROVEMENT
- COMMUNICATION AND COORDINATION FOR HOST EMPLOYERS, CONTRACTORS, AND STAFFING AGENCIES



Recommended Practices for Safety and Health Programs

OSHA
Occupational Safety and Health Administration
www.osha-slc.gov/occupational-safety-and-health
OSHA 3082 October 2016

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❖ OH&S Risk (3.21)

- Combination of
 - the **likelihood of occurrence** of a work-related hazardous event(s) or exposure(s) and
 - the **severity** of injury an ill health that can be caused by the event(s) or exposure(s)


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Get Beyond Hazard ...



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Contact Information



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