



What's on Your Shelf?
Creating a healthy culture at work

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Do you know what health conditions make employees more prone to workplace injuries? Do you know how to help prevent injuries in these workers? Over the next few weeks, let's look at three related documents you may have on your shelf:



- your company's annual aggregate Health Risk Appraisal (HRA) Report
- your OSHA 300 Work Injury Log
- the annual report of your Worker Compensation insurer.

Worker Comp Insurer Annual Report

That last report usually draws the most attention, because it represents a large amount of wasted money. But it's just "the tip of the iceberg." The accidents tallied on your OSHA 300 log, plus unrecorded "near misses" and safety breaches, form the 80 percent of the "iceberg" hidden under the water. And, the larger these "injury icebergs" become, the more the danger they could "sink the ship" of your company!

Personal health factors among your employees grow these "icebergs" larger. For example, ill health increases employee susceptibility to workplace accidents and occupational illnesses, expanding the "iceberg" beneath the water level. And these same factors can make recovery from a work related injury or illness more difficult and prolonged, adding to your company's Worker Comp price tag. The "iceberg" then becomes larger on top.

But think about where icebergs come from in the first place: they are just bits and pieces broken from massive glaciers! Ill health in your work organization, and behaviors that increase the risk of illness, form a massive "glacier" that burdens your company in many ways. One way is that it increases the number and the cost of accidents in your workplace. This causes more "injury icebergs" and makes them larger, top to bottom. Health risks can lead to illness, next to occupational injuries and illnesses, and finally to higher Worker Compensation costs.

HRA Report

The HRA Report gives you a snapshot of what is in your company's "illness glacier," as we discussed last week. And, the more employees who participated in the HRA, the more full the snapshot. Look for the items below. At the same time, look at your OSHA log and Worker Comp report to see the size of the problems to which these factors add:

- Risk-taking behaviors away from work: Most HRAs include questions about behaviors that reflect a general tendency to take risks. It has been shown that people who tend to "live dangerously" also "work dangerously." For example, a habit of more than two alcoholic drinks per day, failure to use seatbelts at least 90 percent of the time, or a history of driving under the influence of alcohol are non-occupational risk-taking behaviors that also add to the risk of an occupational injury (Forrester, 1996). Obeying the speed limit when driving has also been shown to be a marker for a lower likelihood of having an occupational injury (Gaines, 2006). Other researchers showed that the risk an alcohol abuser had of an occupational injury related more to their overall risk-taking behavior rather than to the direct affects of alcohol (Dawson, 1994). All of these are common HRA questions, and give you a measurement of how many risk-takers you have.
- Emotional distress, job dissatisfaction, job stress, and stressful life events: For decades, researchers have shown that distressed employees are more likely to have workplace accidents and injuries (Niemcryk, 1987,

Cooper, 1987, and Shaw, 2006). Your HRA Report tells you about employee stress levels, job and life satisfaction, and gives you a barometer of employee morale. Less stress means fewer injuries. And, injuries that happen to mentally healthy employees have lower disability costs. Depression especially adds to the risk and length of a Worker Compensation case.

- **Obesity:** This has been extraordinarily well studied, including its effect on work injuries, workplace hazards, worker compensation costs, and occupational illnesses. For example:
 - Carpal tunnel syndrome risk is increased up to twofold by obesity (Ferry, 2000, Nathan, 2002 & 2005, Atroshi, 1999).
 - Lumbar spine disc disease risk is increased three-fold just by being overweight (BMI >27.5). (Matsumoto, 1998).
 - Knee arthritis risk is increased fourfold in obese vs. non-obese women (Harris, 2005, Liu, 2007, Schulte, 2008).
 - Traumatic injuries and musculoskeletal disorders in general are made more common by obesity. (Schulte, 2008).
 - Worker compensation claims are increased by obesity. There is a linear relationship between BMI and the rate of claims. Employees with BMI >40, compared to recommended-weight employees, had twice as many worker comp claims, 13 times more lost work days, 6 times higher medical costs for worker compensation care, and 10 times higher worker comp and indemnity costs. This was especially true of claims involving the low back, lower extremity, wrist or hand. This includes sprains/strains/contusions, slip/falls, and lifting/exertion. The combination of obesity and high risk occupation was particularly detrimental (Ostbye, 2007).
 - Occupational asthma is more common in obese workers. Workplace exposures and obesity are both risk factors for asthma, and 15-20 percent of adult asthma is occupational (Schulte, 2008).
 - Adverse health effects from workplace exposures happen more commonly to obese employees. This includes exposure to heat stress, nervous system toxicants, vibration, and carbon nanotubes. Even the risk of a work-related motor vehicle accident is higher among obese employees (Schulte, 2008).
 - Work factors can also increase the likelihood of becoming obese. Chronic work stress, shift work, sedentary work, and rated work ("piece work") have all been shown to increase the chance employees will become obese (Schulte, 2008).
 - Many conditions are shown to be made more common by the combination of obesity plus other workplace factors. This is true of heart disease, high blood pressure, short-term disability, unscheduled absence, decreased productivity, and involuntary retirement (Schulte, 2008).
- **Smoking:** Increases the risk of dozens of health conditions, including many that are relevant to workplace safety. Studies have shown this for the following.
 - herniation of cervical and lumbar spinal discs, and lumbar spine disc degeneration (Kaila-Kangas, 2006),
 - arthritic knee pain (Felson, 2007),
 - lateral epicondylitis ("tennis elbow") which was increased three and a half fold (Shiri, 2006),
 - carpal tunnel syndrome (Nathan, 2002 & 2005)
 - osteoporosis, plus delayed healing of fractures of bones and of wounds in general.
- **Inadequate exercise:** Inactivity has been shown to be a risk factor for occupational low back problems. It doubles the risk (Feuerstein, 1999). This is true of individuals who lack strength (Cady, 1979) and flexibility (Gaines, 2006). Flexibility deficiency also increases the risk of injury in general (Gaines, 2006).

OSHA Log

To learn how these things have affected your company's experience, browse your OSHA Log to see if it reflects the conditions listed above. For example, does it show many lifting-related strains? This may reflect lack of employee conditioning. Are there falls from heights, or tow motor mishaps? Risk-taking behavior contributes to these. Your OSHA log is affected not just by the nature of your industry and the safety of your work environment, but also by the health and lifestyle of your employees.

Likewise, this influences the size and number of claims in your Worker Compensation Report. Personal health can be the difference between a “minor injury” which with few medical treatment and disability costs, versus one with major loss. Have seemingly-minor mishaps led to long and costly claims? This can be an effect of anything from unhealthy lifestyle to pre-existing personal medical or psychological conditions.

How to Improve

To learn how to improve this, let’s return to “injury icebergs.” Most likely, you already use traditional injury prevention strategies including ergonomics, environmental safety, ongoing employee training, and personal protective equipment. These “melt the iceberg” below the water. And you do worker comp case management, disability prevention, and return-to-work programs to shrink the top. But how do you melt an “illness glacier?”

Everything you do to promote health and manage chronic disease at work will pay benefits in terms of injury and disability prevention. But, to stop this relentlessly advancing glacier, you obviously must go beyond “health promotion” to a true integration of resources. Occupational safety and health, and health promotion, can and must work together. As always, it is about creating a culture of safety and health.

For example, helping employees with obesity is difficult at every workplace, especially if it is a problem viewed in isolation. An extensive review of best practices (Katz, 2005) “found strong support for multi-component interventions aimed at diet, physical activity and cognitive changes but insufficient evidence for diet, physical activity or cognitive changes alone” (Schulte, 2008). It’s not realistic to just have a weight loss contest at work. Effective programs must include things as diverse as the price of healthy vending machine items to the promotion of stair climbing in the office building.

All of these are examples of priorities needed to change your company culture to one of safety and health:

- Tobacco cessation programs, smoke-free workplaces, and a tobacco-free culture in your workplace
- Exercise promotion (cardio, strengthening, and stretching), ongoing daily activity, and creation of a culture of vigor and activity
- Healthy eating, including education programs, a healthy eating environment in the workplace, and a culture of nutrition
- Emotional well-being, including daily stress relieving skills, work/family balance, and a culture of respect for the worth of each person
- Wise medical consumerism, especially of preventive resources such as immunization, screening and early detection programs, prenatal and preconception care, biometric testing and health coaching are needed to keep employees well. And, when employees are becoming ill, they need disease management and evidence-based quality care management programs to prevent disability and remain productive.
- Safety at home, at work, and during recreation, emphasizing reduction of employees’ risk taking behaviors, is essential in a culture of safety. Education about prudent use of alcohol, buckling the safety belt, wearing a bike or motorcycle helmet or life vest, are all messages that play well with workplace safety promotion. Employees have to “get it” at work, at home, and at play.

These “big picture” solutions are unfortunately far more difficult than a “disease of the month” approach. But, the rewards are huge for those companies that invest the wisest and invest the most. The rewards include not “only” lower injury rates and Worker Comp costs, but better medical claims experience, employee productivity, and corporate success. All must view health “as an investment to be leveraged, rather than a cost to be justified” (Loepke, 2006).