

Disney's Mission Possible: Preventing Body Motion Injuries Over the Long Run

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Introduction

According to the U.S. Bureau of Labor Statistics 2011, body motion injuries (also known as MSDs or ergonomic injuries) to the back, shoulders, legs and arms accounted for 29% of all injuries resulting in days away from work. The median number of days away from work for all body motion injuries is eight. However, in service industries - merchandise sales, food preparation/table service, and custodial work - both the incident and lost day rates are significantly higher. These numbers did not change significantly between 2010 and 2011. It's estimated that 130 million people work in the service industry in the U.S. Lost workdays and Workers' Comp claims are only the beginning of the costs associated with these injuries.

Disney has learned that preventing body motion injuries requires a strategic coordinated effort on the part of the people performing the jobs, their leaders and the safety professionals ... most especially the people doing the work. In service organizations jobs often involve a wide variety of tasks, materials, equipment and environments. Many of these jobs offer a high degree of work independence and some jobs involve travel and remote work locations. Typically people working in the front line of the service industry are often rewarded for getting tasks done quickly - preparing and serving food, cleaning rooms, and taking sales orders. The expectation of being rushed in the service industry is quite common. In addition to typical service industry jobs, Disney also has a wide variety of "behind the scenes" jobs including laundry facilities, warehousing, manufacturing, construction and other trade-type jobs. This presentation reveals how Walt Disney Parks and Resorts develops and utilizes "agents" in the operations as well as leaders and safety professionals in order to implement a long term, multi-dimensional process designed to reduce soft-tissue body motion injuries. We will discuss case studies in several operations to highlight the process, including Attractions/Operations and Manufacturing.

Disney Parks & Resorts Integrated Approach

To look at what happens when an MSD injury occurs, it appears that most strains and sprains are generally investigated by the injured employee's supervisor. This investigation is usually limited to an interview that asks the employee some combination of the following questions:

1. What hurts?
2. What was the employee doing when the pain occurred?
3. In the employee's opinion, what caused the pain?
4. What does the employee believe might prevent a recurrence of a similar future pain causing incident?

As safety professionals, we know that an MSD incident doesn't usually come from the task being performed (an acute exposure) but rather by a long-term series of events (a chronic exposure) that may be the same event over and over (repetitive incident) or by various high-risk tasks. So how do we begin to help our employees understand risks, how to apply training and how to use techniques to lower their risk?

Disney has a rich culture embedded in a long heritage called the "four cornerstone tradition" - *Safety, Courtesy, Efficiency and Show*. This process starts with initial employee training followed by specific elements of on-the-job training. When a new employee comes to work at Disney's Parks and Resorts, they are immersed into a one-day class about the company's heritage including our four cornerstones called *Traditions*. As they move into their work location, they are taught the required regulatory training and start learning their new role. As they start on-the-job training, key techniques that reduce unnecessary stress and strain are embedded into the training - without telling them they are learning ergonomic techniques. They are given formal ergonomic training as they continue their journey into their new role.

The code that helps everyone at Disney Parks and Resorts is an interdisciplinary team that uses a code called Safety In Motion. This code provides a common language for risk recognition and risk reduction that is easy to apply to everyday tasks – both on and off the job. Leaders, front line workers and safety professionals have a common language, much like finance people or engineers have their own language.

The Safety In Motion code identifies key postural risk factors that are easy to see when tasks are being performed:

- Elbows in the red zone
- Wrists in an end-range motion
- Upper body over line of weakness foot position
- Spine flexed in an out-curve

Professionals in ergonomics and health professions like physical therapy know that there are 3 key risk factors that contribute to body motion injuries: extreme force, awkward posture, and extreme fatigue. The postural risk factors are easy to see in the context of everyday tasks like reaching, lifting, carrying, pushing and pulling. This makes it easy for your team to visually monitor operations and communicate efficiently to each other and their Cast Members when they see a person at risk. Exhibit one shows the relationship between the three factors.

The Safety In Motion code also calls out safer behaviors:

- Elbows in the green or yellow zone
- Wrists mid-range, thumbs up, index finger relaxed
- Upper body over line of strength and balance
- Spine with aligned with lumbar in-curve

And, the Safety In Motion code identifies the key ergonomic and safety interventions:

- Tools and Equipment (safety by design)
- Physical Technique (safer behavior)
- Re-energize (reduce fatigue, improve physical condition)
- Early Warning (safety intervention)

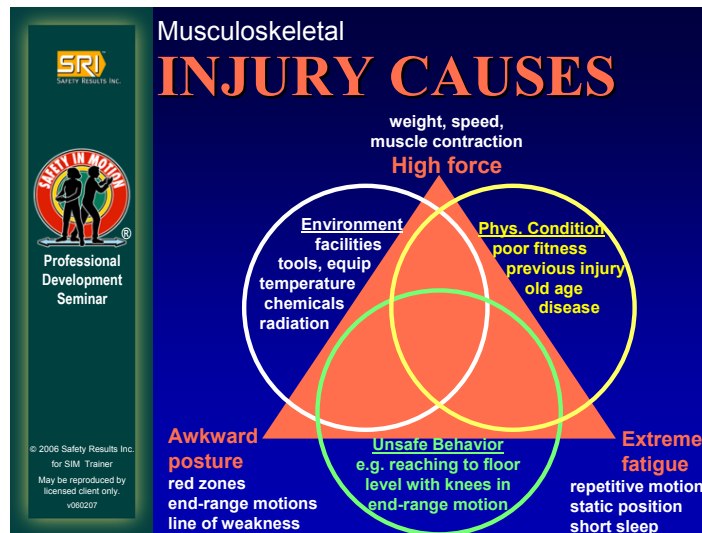


Exhibit 1. The inter-relationship of sprain and strain risk factors

This code is taught through a series of engaging physical demonstrations that prove it is possible to reduce unnecessary physical stress and improve balance and strength. And it is practiced through observation and analysis of stressed-better photos and videos.

Your team may be diverse. But when they know and use this code, it enables them to efficiently observe, intervene, plan and communicate to reduce the risk of body motion injuries. In short, this code enables your team to communicate about key ergonomic guidelines and risk factors out in the field. Exhibit 2 provides an illustration of the system.



Exhibit 2. The inter-relationship of sprain and strain risk factor controls

Continuing the journey is one of the most important components to ensure employees continue to perform their role correctly is a continuous observation and feedback loop from leaders. This feedback is provided for many types of employee actions – are they interacting with guests, are they courteous, and are they safe? While observing their actions, safety and ergonomics play a key role in the observation loop. We will show our observation templates and provide specific real-world example of how this tool is used. It is anticipated that we will also show our automated hand-held system by June 2013.

Safety professionals also perform observations on what they see. Some of this is informal in nature when walking through an area; at other times it is a formal observation process (audit). If we have taught the leaders how to observe their employees and provide feedback, the safety professional should see very few issues during their observations. A behavior-based system is used to not only to improve observations but again to provide the feedback loop to employees.

Other resources are also used throughout Disney - health professionals, athletic trainers and physical therapists are also engaged and integrated into the process. Service industry employees engage their body to perform their work - it is very typical that they stand or walk for long periods of time, perform repetitive motions (ever prepped food for hundreds of guests?), and bend and twist. We perceive some of our employees as “athletes” and condition and strengthen them for their job. These professionals are taught the same Safety in Motion techniques so they can talk with employees using the same language. The statistics for one area will be shared to show the return on investment for athletic trainers.

The newest tool being used to identify injury trends is using Predictive Analytics to statistically predict where the next injuries will occur in a population. This entails using many different metrics (work shifts, incident rates, types of incidents, employee job titles, etc.) and using a model to predict “the future” incidents. At the time of this paper, it is a pilot project being conducted at Walt Disney World and it is expected that the results will be readily available to discuss by June 2013.

Case Studies

Using the Safety in Motion code as the basic language, it still has to be customized to a particular group of people. For example what a person does to board guests onto a ride is far different than a housekeeper preparing rooms and still different from a manufacturing person who builds and repairs things. Two case studies will be called out during this session:

- Manufacturing – using a combination of athletic trainers, task analysis, observations and leader commitment, learn how Safety In Motion code helped reduce their injuries and improve morale
- Ride Operations – by designing a new facility, learn how the Safety In Motion integrated a common language with engineers and designers to provide a great working environment.

After attending this session, attendees will be able to:

- Identify the key roles required to successfully prevent or reduce body motion injuries in the fast paced service sector
- Select and prepare employees and leaders to effectively fulfill those roles
- Recognize and identify the terminology shared by all roles
- Develop an approach to effectively analyze jobs/tasks and
- Select appropriate interventions to prevent body motion injuries

Bibliography

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