How To Maintain Safety Excellence Using Leading Indicators

Jon Kabance, RKT
David McMichen, CSP
About the Speakers

David McMichen, CSP
Director of Health & Safety
Georgia Power

In July 2016, David was named Director of Health & Safety for Georgia Power to help evolve the company’s safety culture. David has 20+ years of experience in safety & risk management and is a student of safety culture.

Previously, David served as Vice President of Environmental Health & Safety at Skanska USA and was responsible for all Midwest projects. Prior to Skanska, David worked for URS Corporation (now AECOM) as a Senior EH&S Manager for major construction and modification projects in fossil, gas and nuclear power industries.

Jon Kabance, RKT
President
BIOKINETIX

As a registered Kinesiotherapist and President of BIOKINETIX, Jon has been masterful in combining his expertise in exercise science, kinesiology and education with the real-world demands companies face every day as they look to reduce employee injury rates.

Fourteen years ago, Jon founded BIOKINETIX with the idea of reversing how medicine is practiced. Rather than simply reacting by treating employee injuries, his vision was to proactively reduce the risk of injury using exercise and education. Jon’s thought leadership has helped clients save over $100 million through strategic prevention and wellness programs.
Learning Objectives

1. Understand how a proactive sports medicine approach can be used to sustain a culture of Safety Excellence in the workplace.

2. Identify the 5 key components of an occupational injury prevention program.

3. Identify the leading indicators used to measure the impact of each program component for a return on investment.
Partnership History
There Must be a Safety Revolution in the Hearts & Minds of Our Employees

Before/At-Risk

After/Safe
Our Safety Journey

Target ZERO
- Safety is the absence of accidents
- Focus on what went wrong/discipline
- Care about the numbers
- Reward Target ZERO (zero injuries)
- Utilize investigations to point blame
- Analyze failures
- Discipline employee for mistakes
- Be reactive when events happen

Safety Excellence
- Safety is about our people & keeping them safe
- Focus on learning/prevention/sharing
- Actively care about our employee’s safety
- Recognize safe behavior & safe execution
- Utilize Human Performance to learn & improve
- Analyze performance improvement indicators
- Give Positive Reinforcement to build trust
- Be proactive to prevent events
Our Safety Journey
SAFETY IS HOW WE SHOW OUR CO-WORKERS HOW MUCH THEY ARE VALUED.
Thinking Differently About Safety

Safety isn’t bringing first aid to the injured; Safety is bringing aid first to the uninjured.
Program Performance

- Near Misses
- Formalized Observations
- Safety Leadership Training
- Critical Risk Plans
- Functional Movement
Reversing the reactive culture of medicine through prevention-driven services

Engaging employees in exercise directly within the occupational setting

Incorporating evidence-based best practices in sports medicine, kinesiology, and medical ergonomics
Program Implementation
1st Day of Employment

3-Minute Warm-Up
Every Day (Pre-Shift & Post-Break)

Functional Movement Screening

New Employee Training / Line School Support

At-Risk Behavior Intervention
Daily, Weekly or Monthly (as Scheduled)

Personal Programs
Daily

Education
Retire Injury-Free! Ready & able to enjoy next steps in life

Daily, Weekly or Monthly (as Scheduled)
3-Minute Warm Up

Pre-work resistance exercise sessions that engage employees on-site in a group setting.

- Movements that effectively prepare upper + lower body
Warming Up

Increases blood circulation

Increases body temperature

Prepares joints for movement

Improves balance & coordination

A modern, sports medicine derived method that engages the muscles in movement and properly prepares the body for the physical demands of work.
## Why Not Stretching?

<table>
<thead>
<tr>
<th>Warming Up</th>
<th>Static Stretching</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signals the sympathetic nervous system</td>
<td>☑</td>
</tr>
<tr>
<td>Readies nutrients from the liver</td>
<td>☑</td>
</tr>
<tr>
<td>Increases cellular metabolism</td>
<td>☑</td>
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<tr>
<td>Dilates lungs</td>
<td>☑</td>
</tr>
<tr>
<td>Creates pliability in tendons &amp; ligaments</td>
<td>☑</td>
</tr>
<tr>
<td>Increases lymphatic circulation</td>
<td>☑</td>
</tr>
<tr>
<td>Primes somatic nervous system</td>
<td>☑</td>
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<tr>
<td>Enhances psychological preparedness</td>
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3-Minute Warm-Up Program
Location: Plant Wansley
Leading Indicator: Warm-Up Program

**Average Proficiency***

<table>
<thead>
<tr>
<th>Upper Body</th>
<th>Lower Body</th>
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<tr>
<td>8.58</td>
<td>3.86</td>
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*Assessed by grading the mastery of each movement of the upper and lower body warm up

**TESTIMONIAL**

John Hulin  
Forest Park Meterman  
32 years

"Since BIOKINETIX implemented the 3-minute warm-up program, and I started doing my correctives, I have noticed that my leg cramps are gone. I used to wake up in the middle of the night with cramps and that is a horrible feeling. It is a great feeling not to have cramps any longer. The exercise is working for me."
Functional Movement Screening

Time-efficient screening that proactively identifies functional limitations

- Corrective Exercise Programs
- Strength & Conditioning
Functional Movement Screening

Includes 7 movement patterns and 3 clearing tests, which are used to proactively identify:

- Pain with movements
- Movement limitations, dysfunction, or asymmetries
- Problems with mobility and stability

Corrective exercise interventions are then given to help employees:

1. Mitigate any dysfunction observed in movement
2. Maintain functional ability

A systematic tool that measures basic movement patterns to identify potential risk factors for injury
Strength & Conditioning

Increases force generation for lifting, pushing, pulling and carrying

Increases tensile force in muscles to reduce strains &

Increases condition of muscles to recover from repetitive stress

Resistance-based conditioning to increase muscle strength + endurance
## Leading Indicators: Functional Movement Screening

### Average FMS Scores

<table>
<thead>
<tr>
<th>Movement Pattern</th>
<th>Initial Score</th>
<th>Re-Screen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deep Squat</td>
<td>1.82</td>
<td>1.91</td>
</tr>
<tr>
<td>Hurdle Step</td>
<td>1.67</td>
<td>1.9</td>
</tr>
<tr>
<td>Inline Lunge</td>
<td>1.66</td>
<td>1.85</td>
</tr>
<tr>
<td>Shoulder Mobility</td>
<td>1.91</td>
<td>2.03</td>
</tr>
<tr>
<td>Active Straight-Leg Raise</td>
<td>1.49</td>
<td>1.75</td>
</tr>
<tr>
<td>Trunk Stability</td>
<td>1.52</td>
<td>1.73</td>
</tr>
<tr>
<td>Rotary Stability</td>
<td>2.03</td>
<td>2.21</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12.14</strong></td>
<td><strong>13.39</strong></td>
</tr>
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### % Total Participation:

- **86%**

### % Improvement:

- **10%**

### TESTIMONIAL

Shane Holcomb  
Georgia Power Lineman  
Gainesville  
14 years

“I can tell the difference from before BIOKINETIX came and after. The stretching and other exercises that I have done has decreased the amount of discomfort I have always had in my shoulder, back and knees. I have an overall better feeling throughout the day then I used to.”
Using early recognition of symptoms to mitigate + prevent recordable injuries and illnesses.

- Early Intervention
- Well-Being
Early Intervention Programs

Provides guidance for **wellness** initiatives and goals such as:

- Repetitive motion
- Aging workforce
- Sedentary work
- Prolonged sitting or standing
- Light duty + return to work

Proactive personal programs customized to individual needs that address early signs of discomfort and health concerns
Exercise & the Aging Workforce

- By 2024, 25% of U.S. workers will be age 55+
- While accident frequency decreases with age, injury severity and fatality increase
- Exercise is one of the most significant modifiable variables proven to improve the functional ability of an aging population

### Warming Up
Risk: Progressive loss of elasticity and bone density.

Warming up helps these workers proactively mitigate the physical changes of aging, including reduced ligament elasticity and bone density.

### Strength & Conditioning
Risk: Progressive loss of muscle tissue & fiber, which places stress on the joints.

Strength & conditioning helps aging workers reduce and/or delay the loss of muscle mass.

### Resetting
Risk: More likely to need hospitalization after an injury, experience fractures, & have slower recovery times.

Resetting after repetitive job tasks helps reduce the likelihood & severity of recurrent injuries.
Leading Indicators: Personal Programs

Successful Closure Rate*

<table>
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<th>Early Intervention</th>
<th>Well-Being</th>
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<tr>
<td>98%</td>
<td>93%</td>
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*Rate of closed programs resulting in a resolution of soreness & discomfort

*Rate of closed programs resulting in successfully achieving a wellness goal

TESTIMONIAL

Larry Ballard  
Georgia Power Mechanic  
Plant Yates  
38 Years

"Since the start of the BIOKINETIX program, it gave me the motivation I needed to start taking better care of myself. I have lost 12 pounds by changing how and when I eat. I’m feeling better than I have in a long time.”
Observe, identify, & correct at-risk behaviors of specific job tasks.
At-Risk Behavior Intervention

After identifying any at-risk behavior or body positioning, employees are provided feedback in real time by:

1. Demonstrating correct behavior
2. Guiding employee to perform correct behavior
3. Validating that these corrections are applied to job task

Observe and track work performed on job sites to provide body mechanics coaching & mitigate at-risk behavior
Leading Indicator: ABIs

% At-Risk: Primary Triggers & Body Parts

- % At-Risk: 84%
- Awkward Posture: 74%
- Shoulder: 51%

TESTIMONIAL

Michael Moore
Georgia Power
Troubleman
Savannah
33 Years

“This is the best thing the company has done for us in my time here. I can already see results in a short time and already feel better.”
Injury prevention & wellness components incorporated into employees' daily routine through practical pieces of education.
Ergonomic Education

Utilizes insights derived from At-Risk Behavior Interventions to create standard operating procedures for specific job tasks.

Topics include:

1. Engineering modification awareness
2. Ergonomics beyond body mechanics
3. Job-specific exercise

Time-efficient, interactive education that delivers task-specific ergonomic best practices.
Well-Being Education

Topics are easily digestible, can be shared company-wide, and include:

1. Nutrition On-the-Go
2. Hydration
3. Type II Diabetes Protection
4. Sleep Strategies
5. Stress Management

Research-driven education that encourages employees to adopt & maintain positive health behaviors.
Employee Testimonials

Michael Moore
Maintenance Specialist
Plant Wansley
31 years

“Before the start of BIOKINETIX, I have suffered with flare-ups in my mid back for the last several years. Since starting my correctives, I have become more aware of my body. Therefore, for the first time in years, I was able to go camping, set up, and sleep without being sore the next few days afterwards.”

Cedric Estelle
Maintenance Manager
Plant Wansley
8 years

“Periodically, I would have discomfort in my low back when standing for a period of time. Since starting my correctives, I have noticed more flexibility, and less discomfort. I can see benefits of doing something small most days. I don’t see why you would not want to partake in the BIOKINETIX program.”

Kenneth Newsome
Meterman
Athens – Power Delivery
31 years

“BIOKINETIX has been huge in helping me work other muscles that I have not worked in a long time. I am an avid biker and runner so working other muscles that I do not normally use along with the balancing aspect is going to help me improve my overall fitness and well-being. The warm up program is very beneficial and I can feel the difference.”

Ken McBee
Sr. Compliance Specialist
Plant Yates
32 years

“BIOKINETIX has helped me relieve shoulder discomfort that I had from my younger years. I feel the Warm-Up Program is very beneficial and I can feel the difference. BIOKINETIX provides great customer service while on site! ”
Case Study: Pepsi Americas

Quantifiable results.
Implementing BIOKINETIX Injury Prevention Programs saved Pepsi Americas $322,864 in overall reduced costs related to workplace injuries and illnesses.
Case Study: UPS

Workers' Comp Claims reduced: 46%
DART Rate reduced: 51%
Lost Time Rate reduced: 44%

Reduction in incurred dollar performance: 34%
Additional Client Results

Client: ADM
Continuous days without an OSHA recordable: 814+

Client: Del Monte
Average cost per claim reduced by 37.5%
Average time to close claim reduced by 32.5%

Client: Vienna Beef
380-employee facility
Reduction in soft-tissue injuries: 38%
Additional Client Results

Client: US Foods
80-person workgroup

Total annual Restricted Duty days reduced: 66

Average monthly program adherence: 100%
Nov. 2016 – Oct. 2017

Total annual Lost Time (LT) days due to injury:
Prior to BIOKINETIX: 724
With BIOKINETIX: 1
BIOKINETIX and Liberty Mutual will speak on Total Worker Health at:
2018 National Safety Congress

October 22nd | Houston, TX

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