

Case Study: Major Aviation and Freight Carrier

The Company

One of the nation's largest commercial airlines and freight carriers sought third-party safety and injury prevention support for their ramp agents, baggage handlers, and customer service staff. The Company, which operates out of every major airport in America and around the world in addition to hundreds of small airports across the country, employs thousands of front-line workers on the tarmac to transport luggage and direct traffic, along with gate agents and representatives inside airports.

The Problem

Airline workers face health risks that are unique to their industry. Between loading and transporting heavy baggage, working in cramped and awkward positions around aircraft, and sometimes facing potentially dangerous work conditions, the risk for costly musculoskeletal disorders (MSDs) is always significant. The nature of their work implies a host of issues, beginning with poor posture and work behaviors that lead to high levels of exertion in difficult positions. Ramp agents and baggage handlers are regularly required to perform lifting, pushing, and pulling motions that can lead to acute injuries, chronic pain, and fatigue, often in confined spaces. Those risks only compound when combined with dangerous conditions caused by inclement weather or extreme heat.

Our airline client was no exception. The Company reported MSD rates of over 2.0% among their ramp agents and baggage handlers, with an average cost per claim of over \$40,000. Aiming to reduce its recordable incidents, prevent injuries, and improve overall employee wellness and morale, the Company decided to seek on-site safety support services at a test site.

The Solution

The Company opted to begin its safety transformation with observation and analysis conducted by DORN specialists. Our providers evaluated tasks performed by ramp agents and baggage handlers, observing how they move heavy luggage and freight to and from aircraft and airport conveyor belts. Specialists also reviewed workstations and postures used by customer service representatives inside the airport.

With data from this analysis in hand, our specialists began individualized biomechanics training utilizing our proprietary Instinctive Movement Systems (IMS) program with the front-line workers facing the greatest risk of MSDs, repetitive strain injuries (RSIs), and other overexertion injuries. At these sessions, DORN providers tested employee technique ability to provide a baseline for improvement.

DORN providers also created training materials and visual aids for Company employees on the ground and in the airport. These included ergonomic best practices and instructions to help employees self-correct to maintain healthy postures and work techniques as well as pre-shift conditioning tools to help prepare their bodies for the rigors of the job. Our providers also identified workstations and task processes that could be adjusted to improve ergonomic function.

The Results

For this program, Company participants included both above-the-wing (ATW; 27%) and below-the-wing (BTW; 73%) workers, who share many of the same risks while also facing stressors unique to their set of work responsibilities. Those factors influence which body parts are most affected by overexertion and strain.

Top Areas of Concern

Below-the-wing employees:	
Shoulders	26%
Lower back	26%
Neck	9%
Upper back	7%
Various other parts	19%

Above-the-wing employees:	
Shoulders	28%
Lower back	16%
Neck	31%
Upper back	5%
Various other parts	20%

The Company's initial adoption of DORN's ergonomic services and IMS biomechanics training returned positive key indicators virtually across the board.

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Key Data:

Zero injuries were reported among the participating employees during the program period, which also included hands-on pain relief therapy sessions. Pain levels as rated on the 1-10 VAS scale dropped by 83%, and frequency of pain declined by at least 20%. Analysis revealed that the use of pain medication among the participating workers also decreased by 36%.

The program was also widely popular among the participating workers. Post-program survey results showed that 91% of employees reported lower stress levels, with 85% reporting a significant uplift in overall morale. 92% said that the program had made it easier to perform their tasks at work. Results also showed a 57% drop in absenteeism.

Employees readily picked up the principles and behaviors conveyed in DORN's IMS biomechanics training and individual coaching. Before training, participants recorded an average technique score of 13.24 out of 24 possible points over six distinct movements, which falls into the "Poor" range. After just one session, the average participant score rose to 20.5, climbing further to 21.2 after three follow-up sessions. Scores of at least 21 fall into the "Excellent" range of technique understanding.

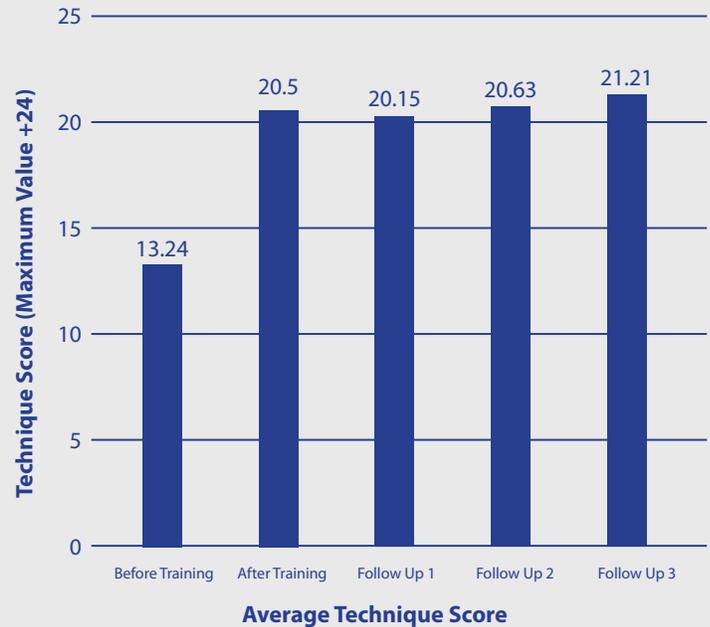
The Takeaway:

Employees improved range of motion by nearly 60% during one 30-minute training session, and demonstrated a retention rate of learned behaviors of 96% three, six, and even eight months after the initial training. These new behaviors have become instinctive to the workers' everyday routine.

For the Company, these results indicate that employees completed the program better able to handle the stressors of their jobs and perform their tasks with minimal injury risk. Workers emerged with lower pain levels that made it significantly easier to do their jobs, with decreased risk of injuries, chronic pain, and fatigue that can lead to costly missed work days and workers' compensation claims. They also demonstrated excellent retention of the knowledge imparted through training and coaching sessions.

With workers trained in key ergonomic and biomechanic principles and pain-relief therapy available to support employees on-site, the Company now expects lower costs and enjoys the long-term benefits of a safer, better-protected workforce.

Biomechanics Training Results



Excellent = 21-24 Good = 15-21 Poor = Below 15



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