

The Industrial Athlete

Preparing the Employee for the Physical Demands of the Job

R.GAGNE, EET, CFE, NADEP

Copyright © 2010 Fit2WRKSM

ABSTRACT

The industrial worker, whose occupation requires various degrees of physical effort for sustained during certain peak periods of the work day, is a unique type of athlete. The ability of this individual to perform physically has a direct bearing on the productivity and competitiveness of the worker's company, much like the success of an athlete's team. The stakes of life or death situations faced by some workers can even elicit physical and psychological stresses that are greater in magnitude than those faced during world-class athletic competition.

Professional athletes do not just walk onto the playing field and participate in their sport without properly warming up. They want to ensure that their bodies are prepared for the work at hand. Why should it be any different for workers at manufacturing and construction sites? It shouldn't be.

Employees in jobs prone to musculoskeletal and repetitive motion disorders need to prepare for each day and different tasks by stretching and warming up, just as an athlete would do before a game. For prevention of future injuries a job specific strengthening program can also emphasize on the essential duties of the job. By becoming industrial athletes, workers can lead safer, more comfortable lives on and off the job. Most industrial injuries are of the soft-tissue nature. By getting the muscles prepared for daily activity, the body is given a protection against those moments of strain.

Sprains and strains were the leading nature of injury and illness in every major industry sector in 2005. They accounted for 40.8 percent of all workplace injuries and illnesses requiring days away from work.

In the preparation of the Industrial Athlete program it is important to develop a stretching and strengthening routine that is job specific and targets muscles that are being repeatedly used during the course of the work day. Because of the various types of work positions found in construction, for example, preparing the body for the work day can prepare the body for repetitive tasks. Companies that have implemented this type of program have found that employees are responsive to exercises and

realize that getting their bodies ready for work makes good sense. About five minutes of exercise is all it takes. Just as machines need lubrication to work properly, stretching and exercising lubricates the body's joints, resulting in easier movement. The result is that workers can go home each day without aches and pains.

Developing a Game Plan

Picture athletes pushing their bodies to the extreme for hours every day. While you might envision professional athletes training for elite competition, this description also applies to the millions of men and women who work in industrial jobs — at refineries, manufacturing facilities, processing plants and other sites. These "industrial athletes" have extremely physically demanding jobs that require lifting, climbing, pushing, pulling and twisting. Their daily activities may include leaning over while applying extreme force on a wrench or repetitive tasks that involve twisting multiple controls in rapid succession. It is important to take a holistic approach to keeping "industrial athletes" in peak condition, from preventing injuries to aggressively treating injuries that occur both on the worksite and off the job. The ultimate goal is to ensure that these industrial athletes can perform their jobs optimally and reduce the number of days they lose to injury. By doing so, we can enable them to remain healthy throughout their careers and in the years that follow.

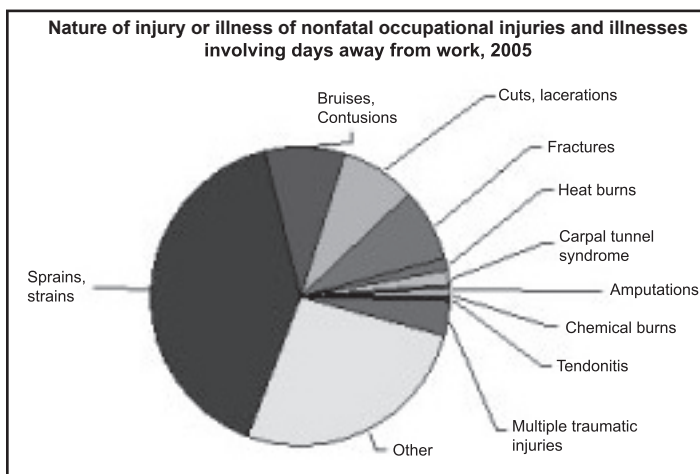
Key Program Components:

Symptom Intervention

These services are designed for employees experiencing mild discomfort or having difficulty performing daily jobs. For these "pre-injury" services, an employee must not have an open state occupational injury claim. Services include stretching and conditioning programs developed by on-site physical and occupational therapists to help employees prevent future injuries. In addition, vocational rehabilitation counselors can create ways for employees to minimize physical stress by using adaptive or protective equipment such as gel knee pads, proper clothing, anti-vibration mats etc.

Job Conditioning

This program is aimed at employees who are starting or already performing physically demanding jobs. To help prevent injuries, employees perform exercises that focus on stability, balance and flexibility. Other exercises are customized for each employee based on specific job needs. The primary focus of the job-conditioning program is to keep the employees working and to increase their productivity. A good way to analyze the types of exercises etc is to first review the primary injuries and what body parts are affected. Programs need to be developed specific to the high incident of injury location.



Source: US Dept Labor Bureau of Labor Statistics, Nov 20, 2006



Work Hardening

This program helps employees return successfully to their previous level of functioning after an injury or surgery. It combines education about safe work methods with conditioning and strengthening exercises and a work simulation program. This ensures people will be able to complete each task of their job over a full eight-hour shift.

Industrial Athletics

In addition to taking responsibility for the employee's own health by attending programs such as smoking-cessation programs and losing weight, employees are encouraged to participate in "industrial athletics." Offerings may include joining a Health and Fitness center, getting involved with other sports activities such as basketball or skiing, and taking advantage of any in house or off site fitness & strengthening programs.

The concept of the Industrial Athlete is not new, but companies are only now starting to understand that investing in such a program will have a direct effect on the sustainability of their workforce. Two case examples of programs and companies already committed to a program such as this are as follows:



Volkswagen

Volkswagen required newly hired production workers for its new U.S. assembly plant to go through a fitness program on top of the usual job training, aiming to forge an "industrial athlete" who can lift, grip, bend and push without injury. Workouts are aimed at better product quality when the German automaker starts building a mid-sized sedan at the plant, which is expected to create about 2,000 jobs. Employees have bought into the program and it is expected to show a resultant increase in quality and overall performance.



BOEING

People who build Boeing products crawl out on wings, twist through small fuselage sections and lift heavy equipment and generally undergo the same physical concerns as a professional athlete. They have to bend, twist, carry, extend reach and have sustained posture to do their job effectively day in and out. The employees receive the same level of advanced care as professional athletes in order to prevent pain and potential injury. It's for these "industrial athletes" that the management is creating a new program at Boeing. The Boeing Industrial Athlete Program combines services such as industrial massage, conditioning exercises, stretching, and physical and

occupational therapy. This program is designed to improve the physical and mental resilience of employees. With services available on site, time away from work is minimal. Since members of the industrial athlete training team spend a great deal of time in the factory, they know about the requirements of each job, which helps them understand why injuries occur and how to help prevent them. The program has multiple benefits, many of which appear rapidly such as seen employees experience improved flexibility, higher energy levels, a more positive outlook, greater resistance to injury and disease and an enhanced ability to handle stress on and off the job.

The sports medicine model components that contribute to the success of this approach:

- (1) Prevention: use of preventive and protective equipment while working or performing the essential duties of the job.
- (2) Conditioning: training that strengthens potential areas of weakness and enhances performance at work. Better adaptation to handle the demands of the job or activity, enhancing endurance has a direct affect on health and well being.
- (3) Early intervention or identification: diagnose the injury as quickly as possible and initiate measures to decrease the severity of disability and allows expeditious transfer to the appropriate care provider.
- (4) Progressive treatment: using focused rehabilitation directed by trained professionals that improves flexibility, muscular balance, and endurance. It is important to treat industrial athletes as comprehensively as you would any competitive athlete, providing guidance and conditioning.

Bringing the sports medicine model to the industrial setting can reduce the medical and non-medical expenditures related to repetitive stress injuries. **To have the greatest impact, the clinical team needs to have the same level of understanding about the demands of a specific job, just as a sports medicine team physician understands the demands of a specific sport or position.** The goal of returning competitive athletes to their functional status before their injuries should be just as aggressively pursued for industrial athletes. In a competitive business environment, it is crucial to have a healthy, strong, highly motivated team to get the job done.



Purolator Courier

A large courier company employing 12,500 of which > 3,500 are Couriers and having 1.1 million pieces shipped every day introduces many potential risks of injury. Furthermore, with over 4,500 trucks and trailers, 15 dedicated aircraft, 140 operations locations, 20 regional sales offices, 150 shipping centers and 2 contact centers the physical demands of the jobs are varied and extreme.

Purolator made a significant effort in the investment of their employees through an integrated approach towards on the job fitness and health promotion. Three key elements made up the program; Promotion of Health and Lifestyle changes, Physical Environment and Occupational Health and Safety, Workplace culture and the creation of a Supportive Work environment.

Objectives were to reduce # of injuries and claims related to physical work, to better equip employees physically through the use of fitness training and therapy techniques and to increase productivity and employee engagement.

Results were very positive and it displayed that team based activities helped improve participation and that the buy in from the employees through structured programs directly affected the bottom line.

In Conclusion

The science of ergonomics has evolved, as has the realization that how humans interact with their workplace is vital for preventing acute injuries and chronic health problems. We as an industry have also realized that our workforce is aging and we are going to need to ensure that they are prepared for the ongoing physical demands of their jobs. Occupational health professionals have come to understand that industrial workers face the same physical challenges as athletes who constantly push their bodies to the limit. By taking a proactive approach that includes safety education, promotion of healthy lifestyles and aggressive treatment of injuries, we can ensure that our industrial athletes remain in peak condition while they are on the job and well into the years after they leave the work force.

Senior administrators, center managers, and health and safety professionals working together as a team with the assistance of the on-site health fitness professionals can effectively turn the tables on work-related injuries.



“Personal accountability is a key to the success of any Industrial Athlete Program. The process is one of continuous improvement—learning about preventative maintenance and how to be and continue to be healthy.”

References

1. Bureau of Labor Statistics, Dept. of Labor, Washington, D.C., Nov. 17, 2006.
2. The 2005 Liberty Mutual Workplace Safety Index, September 2005.
3. OSHA Public Affairs: Statement Of Assistant Secretary Charles N. Jeffress on Effective Date of OSHA Ergonomics Standard, Jan. 16, 2001.
4. Article: Training the “Industrial Athlete”: Developing Job-Specific Exercise Programs To Reduce Injuries OT Practice April 28, 2008 Gerg, Michael J; Smith, S
5. A Sports Medicine Approach to Overuse Injuries The RSI Network - Issue 26 - Feb'98 Jeffrey Pearson, DO North County Urgent Care Medical Center
6. Training the Industrial Athlete for the Future. By Reddy, Leo Publication: Manufacturing & Technology News Date: Friday, May 30 2008
7. Work Conditioning By Bowers, Brent A Publication: Professional Safety Date: Sunday, August 1 2010
8. ‘Industrial Athletes’: Men With the Goods Darcy Padilla for The New York Times By BRADLEY MELEKIAN Published: October 26, 2006
9. Healthy Outcomes Conference 2008, Purolator
VW is a registered trademark of Volkswagen USA
Boeing is a registered trademark of Boeing
Purolator is a registered trademark of Purolator Courier.