

Healthier Workplaces for Healthier Workforces: The Benefits of Implementing Employee Health and Wellness Programs

**Jerome Congleton, Ph.D., CPE, PE
Professor of Ergonomics and Safety Engineering
Texas A&M University System HSC-SRPH
College Station, TX**

Introduction

Dr. Jerome Congleton has many years of experience working in Ergonomics, including eight years of work for ALCOA, his current work for Neutral Posture, Inc. as a research and development consultant and his current teaching position for the Texas A&M University System Health Science Center's School of Rural Public Health. Throughout his experiences, he noticed trends in the workplace that have had traumatic effects on individuals and companies.

One of these trends, obesity, has become one of primary concern. Obesity has life altering health effects to those with the condition. Concerns include, but are not limited to: diabetes, cardiovascular issues and overall lifestyle limitations. Employers should be interested in the wellness of their workforce and providing a healthy environment for their workers for many reasons, including productivity improvement.

While it is generally recognized that healthy habits result in an improvement in overall wellness, it is not as common to notice that small changes in daily life activities can alter health outcomes as desired. Individuals typically enjoy instant gratification, if we do something healthy we want to be healthy now, we do not want to have to work at it. Small modifications can be made in the workplace to slightly change how we work, but greatly improve our health.

While this paper will focus on how wellness can be achieved in the workplace, the principles can be implemented individually or collectively as an organization.

Trends in Today's Workforce

What trends are occurring in the workforce and what do they indicate?

The US Bureau of Labor and Statistics gives insight on the status of the workforce. As of 2008, there were a reported 157 million workers in the United States. This number is expected to increase another 7 million over the next 6 years. The increase in the workforce population begs the question - where are these workers coming from? (BLS, 2007)

As new workers come into the workforce, the older workers typically leave. However, current trends show that the baby boom generation is continuing to work as life expectancy increases thus, increasing the size of the workforce and raising the average age of an employee. With the baby boomers aging, there will be a peak in the percentage of workers in the oldest age category of workers and a decrease in the percentage of younger workers. Workers 55 years old and older are projected to increase from 16.8 percent of the working population to 22.7 percent by the year 2016. (BLS, 2007)

Education is also increasing in the workplace. Over the last 50 years the percentage of the workforce that has at least a bachelor's degree has changed from 3.4 percent to nearly 20 percent. This has readily helped the workforce, as technology has been dramatically enhanced. As technology continues on a steep upward climb, so too must the population of educated workers. It is projected that by the year 2030, a quarter of all workers will have an undergraduate degree. (U.S. Census Bureau, 2006)

Percentage of Obesity in US Adults vs. Time

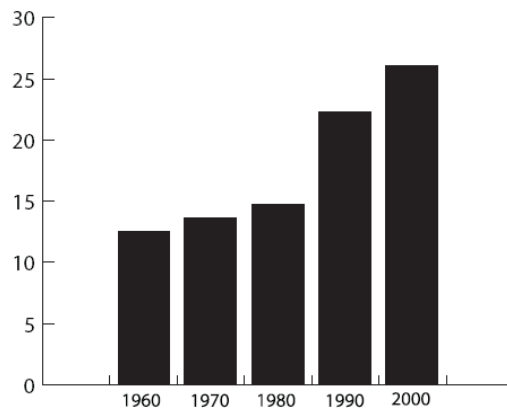


Figure 1. This chart shows the percentage of obesity in U.S. Adults vs. Time. (Benden, 2008)

Another alarming trend among the workforce and general population is the rise in obesity. This can also be attributed partially to technology. With the advent of computers, the workforce and population have become increasingly sedentary. According to the World Health Organization, approximately 66 percent of the nation is overweight or obese and over 4 million Americans are morbidly obese. This category of obesity continues to grow more rapidly than any other category (see Figure 1).

Obesity is the number two killer in the U.S., with 400,000 deaths, second only to smoking at 450,000 deaths. Obese workers will lose 13 times more days of work from work related injuries than non-obese workers. Obese workers also file twice as many worker compensation claims and have seven times higher costs for those claims than their non-obese coworkers. (Benden, 2008) Obesity costs private employers \$45 billion annually in medical expenditures and loss. (Consumer Affairs, 2008)

Problem and Solutions

Each of these trends indicates and relates to specific problems that are faced in the workforce on a daily basis.

The concerns associated with an aging workforce and increase in technology are not limited to just health issues. Time lost and productivity problems related to health concerns are also a factor. Fortunately, most of these concerns can be reduced by proper ergonomics. Ergonomics has been defined many ways, but can be summarized by stating that it is the study of the work to prevent and control injury and illness while improving wellness, productivity, quality, marketing, customer service, delivery and reducing turnover and costs.

One of the major concerns with technology has been the sedentary life of the employee sitting at the workstation. Although we have improved productivity, we have also introduced health concerns that can reduce the potential of the employee. An employee sits constantly at their workstation for extended periods throughout the day with limited movement. Over time, disorders start to form which limit the employees speed and efficiency, and may require time off or medical attention. Cumulative Trauma Disorders (CTDs) is a great example of this phenomenon.

Purdue University completed an ergonomic study that had vital results to the ergonomic case. They showed that with proper ergonomic workstation and office design, they decreased the number of CTDs, including Carpal Tunnel Syndrome cases, by over 60 percent. They also decreased the total Days Away From Work by 44 percent and the Lost-Time Case Rate by 70 percent. This study concluded that effective ergonomics in the workplace provides continuing return on investment.

If we can reduce CTDs by improving workstation design and provide an overall return on the investment, we should be able to then look at other concerns in the office and offer advice on how we can improve the situation. How can we combat the other noticeable trend in the workforce, obesity, by implementing ergonomics? By fighting obesity, we can also provide a return on any investment by improving wellness of employees, productivity, quality, marketing, customer service, delivery and reducing turnover and costs, especially related to health expenses on employees.

Workstation of the Future

Logical reasoning would suggest movement requires more energy than sitting static; thus, can we not encourage weight loss or weight gain prevention by providing opportunities to move at the workstations of employees?

It has long been said that your next posture is your best posture. Movement is a characteristic of an individual's design, meaning people are designed to move. This is not a drastic movement, but a change in posture. We are not designed to sit in a chair for 6-8 hours a day, fixed to a screen, as most people tend to do. How can we provide an environment that promotes movement and continuous changes in posture while allowing the ability to continue working as normal?

One ergonomic solution is to design a workstation that has the ability for a worker to remove themselves from a chair and to work standing up (see Figure 2). The design of this station would have the workstation height at approximately 40 inches, or elbow rest height of the employee. All objects would continue to be within a functional reach and the workstation equipped with a keyboard and mouse tray. A footrest would allow for weight transfer, another posture change, to decrease static fatigue. A raised chair would give the employee the option to sit, but with a desk at this height a standing bias is felt.



Figure 2. The N-tune workstation is one option to businesses who are looking to provide their employees the opportunity to stand with a seated option. (Neutral Posture, 2007)

You may be asking what the benefits are for a standing workstation. How does this apply to wellness and will this help any employees? Standing promotes blood flow through the body and it also encourages posture change. Also attributed to standing is a decrease in pressure on the lower back. Standing provides more functional workspace, which means greater movement within a workstation. Movement equates rather easily into energy burned, which calculates directly into weight loss, or preventative weight gained. Since standing uses more stabilizing muscles, bigger muscle groups and requires more work than sitting static, we have a direct relationship to calories expended while standing. However, the take away point is that standing for two hours a day instead of sitting will burn approximately 280 calories more per day. This is equal to 20 pounds a year or a pound every 13 workdays.

Twenty pounds lost in a given year has serious positive health outcomes. It can decrease a BMI from 2-4 points, drop blood pressure, decrease risk of diabetes, decrease risk of stroke or heart failure and just makes you feel good. Using these standing workstations has been shown to improve discomfort ratings by 26 percent. It has dropped work related illnesses/injuries by 30 percent, and decreased lost time by 80 percent, thus reducing overall associated costs by 95 percent. These outcomes are good for employees and employers alike. Improving comfort by using standing workstations has been shown to increase productivity 17 percent, earning this ergonomic solution a good return on investment. (Benden, 2008)

One of the benefits of using proper ergonomics is an educated workforce. Employees who understand the benefits of the adjustable stations feel appreciative for their ability to adjust the station to their preferences, and they enjoy the opportunity to stand. This gives them a greater

awareness of their personal wellness and encourages them to participate more fully in personal programs or other company programs designed for weight loss and weight gain prevention.

Corporate Wellness

According to The Wellness Councils of America, over 80% of businesses with greater than 50 employees have some sort of wellness program. Seven percent of companies offer comprehensive wellness programs. (AJPH, 2008) For companies interested in implementing or who have already implemented a wellness program within their company it is important that both the employer and employee have buy-in into the program and both actively participate in the program.

Individual employees can take basic actions to improve their work conditions. Once basic principles are taught to employees, the adjustments that are needed become second nature. Adjusting the lights can reduce eye fatigue, height of computer screen and height of workstation or keyboard tray can all be done relatively easily. This can provide changes to the overall wellness of the employee and their environment.

A behavioral change that can take place within an individual is the fostering of exercise routine breaks. Stretching periodically throughout the day keeps employees alert and blood flowing. This will also help them feel better and improve productivity. Many companies are implementing programs to encourage exercise time, both brief and extended, among their employees. For example, some offer opportunities to take walks at lunch. This not only benefits the health and wellness of the employee but reflects well on the company and drives up productivity.

Introducing wellness programs into the health programs offered by companies provides an array of benefits not only to the employer, but to the employee. Employers will see decreased insurance costs, increased productivity, a decrease in absenteeism, a decrease in job turnover and decreased incidences of injuries not to mention be eligible for tax incentives. Employees too will benefit from lower insurance costs and a decrease in injuries while experiencing an increase in their quality of life and overall health.

Some companies who have active wellness programs provide incentives such as money, discounts on products, awards and recognitions, added leave/vacation days, added green space in and around the work environment as well as potential reductions in the employee's insurance premiums. On the flip side some employers impose penalties for employees not participating and taking an active role in the programs provided. For instance some employers may increase insurance premiums for smokers who have chosen to opt out of participating in smoking cessation courses or impose cash penalties per pound for workers who are over the ideal weight limit established. Not hiring high risk workers such as smokers and now the obese have become practice for some companies.

Many corporations are implementing programs to improve the health and wellness of their employees. PepsiCo, for example, offers Pilates, yoga and spinning classes for employees and laundry service for clothes used during the day for exercise so the employees can get back to work. (Petrecca, 2009) Johnson & Johnson and Coors Brewing Company have both reported savings around one million dollars each because of the health programs implemented. Coors

Brewing Company estimated that for each dollar they spent on the health and wellness programs, they received a return of about \$2.36. Johnson & Johnson reported decreased medical costs, days lost and sick days, and decreased absenteeism by about 18 percent. (Brink, 2009)

IBM Spent \$1.3 billion on healthcare for employees, dependents, and retirees in 2008 and has Given employees more than \$133 million in wellness incentives through 2008. Their Analysis results showed IBM saved about \$80 million in reduced health claims. (McNamara, 2009)

Even small businesses are jumping onboard. A 13-15 million dollar company called Wheeler Interested turned an office into a small gym, hired a personal trainer and introduced a smoking cessation program. They now only have 2 employees of the original 34 who smoke still smoking. (Spaeder, 2009)

It is apparent that industry has a need for healthy workers, and employees want to be healthy. Implementing and teaching proper wellness and ergonomics in the work place will enable us to accomplish this goal.

Bibliography

American Journal of Public Health (AJPH), 2008.

Benden, Mark E. *Could You Stand to Lose*. Dallas: Trinity River Publishing, 2008.

Bertera, R. The Effects of Workplace Health Promotion on Absenteeism and Employment Costs in a Large Industrial Population. *American Journal of Public Health (AJPH)* 2008: 1101-1105.

B. Bidassiea, J. McGlothlin, A. Goha, R. Feyena, J. Baranya. *Limited Economic Evaluation to Assess the Effectiveness of a University-Wide Office Ergonomics Program, School of Industrial Engineering & School of Health Sciences, Purdue University, West Lafayette, Indiana, USA, 2009*

Brink, Kevin. "Wellness Programs at Work." *Associated Content*. 2009. Web. 17 Sept. 2009.

Bureau of Labor Statistics (BLS). 2007. *Occupational Outlook Handbook, 2008 – 2009 Edition, Tomorrow's Jobs*. (<http://www.bls.gov/oco/oco2003.htm>)

Consumer Affairs. 2008. *Obesity A More Costly Workplace Health Issue Than Smoking*. (http://www.consumeraffairs.com/news04/2008/04/obesity_workplace.html)

McNamara, Melissa. "Wellness Programs May Trim Health Costs." *CBS News*. 22 Jan. 2007. Web. 17 Sept. 2009.

Neutral Posture, Inc. N-tune Workstation. 2007. (<http://www.neutralposture.com>)

Petrecca, Laura. "Cost-conscious companies re-evaluate wellness programs." *USA Today*. 2009. Web. 17 Sept. 2009.

Spaeder, Karen. "Shape Up." *Entrepreneur.com*. Sept. 2008. Web. 17 Sept. 2009.

U.S. Census Bureau News (USCBN). 2006. *Dramatic Changes in U.S. Aging Highlighted in New Census, NIH Report*.
(http://www.census.gov/PressRelease/www/releases/archives/aging_population/006544.html)

World Health Organization (WHO). 2002 *World Health Report*. Accessed at:
www.who.int/peh/burden/globalestim.htm WHERE TO FIND THE RIGHT STUFF