

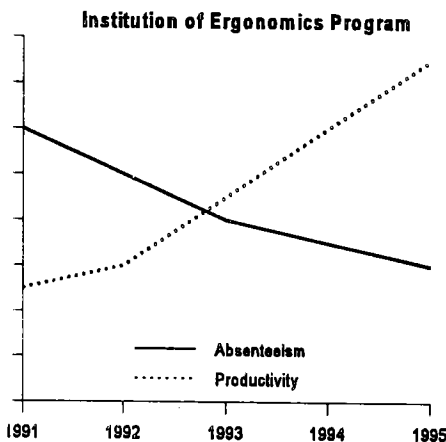


## Just the Facts...

### Ergonomics Makes Good Management Sense

Ergonomics applies knowledge about human capacities and limitations to the design of workplaces, so that the workplace "fits" the worker. Ergonomics programs provide management with the opportunity to--

- Decrease workers' compensation costs (10-90 percent).
- Increase productivity.
- Improve the quality of work.
- Reduce the risk of injury and illness.
- Decrease worker turnover and absenteeism.
- Improve worker satisfaction and morale.



In the past, many employers were not concerned about the ergonomic design of the workplace. Instead, they relied on a process of "natural selection." Workers with lower capacity -- whether it be strength, endurance, or visual abilities -- would move out of the demanding jobs because they could not sustain the effort required. The difficulty of the job determined what percentage of the people would be "fit" for the work.

Natural selection, however, is an expensive and legally questionable alternative to ergonomic job design. The Americans with Disabilities Act and the 1973 Rehabilitation Act prohibit discrimination based on physical capabilities when reasonable accommodation is viable. In addition, the Occupational Safety and Health Administration (OSHA) has issued numerous citations against government and private agencies for workplace deficiencies. Poorly designed jobs that rely on natural selection will inevitably cause injuries to some workers before they can move out of the job. The resulting workers' compensation costs often far exceed what it would have cost to make ergonomic interventions at the work site.

The costs associated with the increasing numbers of workers with cumulative trauma disorders are staggering. Costs include medical care, lost work time, insurance and workers' compensation, loss of material and property damage, increased errors, lost wages, training of a new worker, and administrative time and expense to hire replacement employees and manage the injury claim. The intangible costs of decreased job satisfaction, loss of motivation, and human pain and suffering often are not considered but have a profound impact on the workplace.

- Safety and Health Professionals
- Workplace Illness/Injury
- Workplace Design

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## *Workplace Statistics*

- Roger Stevens (OSHA) predicts that motion and back injuries may account for 50 percent of all workers' compensation costs by the year 2000.
- In 1994, nearly two-thirds of the occupational illnesses reported were associated with repetitive trauma -- an increase of almost 10 percent over the previous year (Bureau of Labor Statistics).
- The work force is aging. Older workers have decreased muscle performance, flexibility, endurance and joint mobility. By the year 2050, over one-third of the U.S. population will be at least 55 years old.
- The disability rate from low back pain in 1993 increased 14 percent faster than the growth of the population (Smith, S.L., Why Industry Needs to Watch Its Back, *Occupational Health*, July 1995, 30-34).
- Manual materials handling injuries result in 12 million lost workdays per year and account for 25 percent of all industrial injuries (National Safety Council, *Accident Facts*, 1993 edition).
- The average cost of a back injury requiring surgery is \$180,000. Back injuries account for about 40 percent of all workers' compensation costs. The estimated total compensable cost of back injuries in the U.S. in 1986 was 11.1 billion dollars (*Journal of Occupational Medicine*, January 1990, 32(1)).
- The average cost of surgery for carpal tunnel syndrome ranges from \$22,000 to \$30,000.
- Upper extremity cumulative trauma disorders are estimated to cost the U.S. \$563 million per year (*Journal of Occupational Medicine*, July 1994, 36(7)).
- Workers' compensation costs, because they include payment for lost workdays and compensation for disability, far exceed the actual medical costs associated with workplace illness and injury.
- From 1 July 1994 to 30 June 1995, the Army paid more than \$590,000 **per workday** in costs associated with civilian injuries and illnesses (Office of Workers' Compensation Program Injury and Illness data).

An effective ergonomics program means working smarter, not harder. Management will see measurable results in terms of protecting the work force, increasing productivity and quality, decreasing workers' compensation expenditures, and reducing absenteeism and employee turnover.