MAKING THE BUSINESS CASE FOR SAFETY: Case Study Shows Benefits of Participatory Ergonomics Continue for Years

Participatory ergonomics is an approach that involves active participation of employees in developing solutions and implementing change to prevent musculoskeletal injuries (MSIs) such as carpal tunnel syndrome, tendonitis and low-back pain, which account for approximately 40% of workers' comp claims. The idea behind participatory ergonomics programs is to encourage workplace stakeholders to work together to identify and remove the hazards or risk factors that can cause or aggravate MSIs, such as doing repetitive tasks and working in awkward positions. Studies have shown that participatory ergonomics programs can reduce MSIs, workers' comp claims and lost days from work. But implementing a participatory ergonomics program takes time and money. To get your company's senior management onboard with such a program, show them this case study from the Institute for Work & Health (IWH), which shows how an Ontario utility continued to benefit years after implementing a participatory ergonomics program.

The Utility Case Study

In 2005, Kitchener-Wilmot Hydro Inc., a utility that now employs about 180 people and serves 91,000 homes and businesses in southwestern Ontario, was invited to join five

other utilities in a research project on preventing MSIs). George Minow, Manager of Health, Safety and Wellness at Kitchener-Wilmot Hydro, quickly said yes.

‘At that time, soft-tissue injuries were regularly the number-one or number-two cause of injury,’ says Minow. But in an industry where falls, burns and shocks are also common hazards, ‘soft-tissue concerns often took a back seat,’ he adds.

The project set out to examine the implementation of participatory ergonomics programs in small and medium-sized utilities where resources are scarce. The research was conducted by a team from the IWH, the Centre of Research Expertise for the Prevention of Musculoskeletal Disorders (CRE-MSI), and the Electrical & Utilities Safety Association, which has become part of the Infrastructure Health & Safety Association (IHSA).

At the start of the project, the utilities involved each created an ergonomics change team made up of staff from different departments. All members of the team, called the Ergonomics Wellness Team (EWT) at Kitchener-Wilmot Hydro, received training. ‘They learned about soft-tissue injuries, how to fit work to the worker, how to get the most bang for the buck from an ergonomics program by making good purchases on new equipment and choosing cost-effective changes,’ says Minow.

A questionnaire completed by employees at the start of the project helped the EWT and management understand that soft-tissue concerns existed across the utility. ‘The questionnaire said to us, ‘You’ve got lots of work to do,” says Minow with a small chuckle.

The ergonomics team helped bring in significant changes in how work is done at Kitchener-Wilmot Hydro:

- Job procedures were changed to reduce injury risk. For

example, power line technicians used to lift reels of ropes to install overhead lines. These reels are 75 kg each when completely dry and heavier when rain-soaked, putting power line technicians at risk of back injury’even with two workers lifting the reels. Today, this task is done by machine lifts.

- Ergonomics principles were applied to the purchase of new tools. Trial units of ergonomically designed presses, cutters, cable benders and impact wrenches are now purchased through the safety budget and rotated through to the crews and service trucks to be tested on the job. If workers save time and labour with a tool, then supervisors can request the new tool through the tool budget, which ensures the utility limits its losses if a tool proves to be ineffective in the field.
- Ergonomics principles are also applied in the specifications and customization of new trucks. Trucks are now equipped with air-ride seats to reduce vibration. They have reel stands and cable pulls to prevent the recurrence of strain injuries. On one underground service truck, a 17-kg propane tank that once had to be lifted in and out of a trench many times a day now stays on the vehicle. Instead, a retractable hose is used to take the torch to the trench, reducing the manual handling required.
- A stretching program was introduced. First thing every morning, workers take a few minutes to warm up their large muscle groups. Field workers meet for a voluntary stretch session at 7:00 a.m. in the utility’s auditorium. Office employees stretch at 8:30 a.m. in a conference room.

Today, nearly 10 years after the project concluded, the utility’s participatory ergonomics program has continued to have a lasting effect. ‘We have sustained a 30% reduction in soft-tissue injuries, even with an increase of staff,’ says Minow. ‘And the severity of MSIs has decreased, as staff

report symptoms earlier and so are helped faster.'

In addition, it's not just EWT members who look out for and take steps to reduce MSI hazards. 'Having the team has helped highlight the importance of ergonomics issues throughout the workforce,' says Minow. 'Ergonomics is now considered in all that we do, by team members and non-team members alike.'

Although the team has had a near complete turnover in membership since it was created, there has never been a question of disbanding it. 'When an opening comes up, there's always a lot of interest. Quite a few people volunteer to be on it,' says Minow. 'What keeps it going is commitment,' he adds.

The team meets regularly every two months and, once a year, it gets together with ergonomics change teams at other hydro companies to share ideas. 'Having things to work on also keeps the team going. You're never really done.'

Minow credits the research project many years ago for introducing participatory ergonomics to Kitchener-Wilmot Hydro. 'I am very happy that we joined the program,' he says, adding it has led to the creation of a team that works well and attracts those who are interested in helping others take steps to reduce hazards. 'Our company has won safety and wellness awards over the years, and this team is a jewel in the organization. It's one of the most proactive things we do.'

BOTTOM LINE

It can be a struggle for safety professionals to convince senior management to do anything that goes beyond mere compliance with the minimum requirements in the OHS laws. Because of the time and effort that goes into setting up a participatory ergonomics program, it may be perceived as a 'luxury' for a company. But case studies such as this one can show senior management that such programs can have big impacts

on health and safety performance and the company’s bottom line’and that these benefits may be long-lasting.