5 Keys to Effective Ergonomics Programs



An ergonomics program is a great way to identify hazards or risk factors in your workplace that can cause musculoskeletal injuries (MSIs). But how do you know if your program is effective? One way is through benchmarking—that is, comparing your ergonomics program against others that have proven to be effective. A benchmarking study by Humantech, an ergonomics consulting company, looked at the ergonomics programs in major corporations and identified what elements made them successful. Here's a look at the study's findings, which you can use to assess your own program.

Ergonomics Program Benchmarking Study

The study looked at 17 Fortune 500 companies with international operations and established ergonomics programs. The companies were various sizes and in a wide range of industries, including:

- Chemical industry;
- Printing/packaging;
- Metal refining and production;
- Various kinds of manufacturing;
- Meat processing;
- Insurance; and
- Pharmaceutical industry.

The study focused on the companies' current program management of workplace ergonomics. It evaluated the programs using the elements of a safety management system:

- Policy;
- Planning;
- Implementation and operation;
- Checking and corrective action; and
- Management review.

Each element was assessed based on its own criteria. The programs were then placed on one of three levels—reactive, proactive and advanced—in what's called the Workplace Performance Maturity Curve, which reflects improving effectiveness, comprehensiveness and sustainability of an ergonomics program over time. Mature programs are the most effective.

The Study’s Results

The study looked at changes in the incidence rate of recordable injuries/illnesses to measure improvement in the companies tied to the ergonomics programs. Eleven participating companies had before and after injury statistics. They saw annual reductions in the incident rate of between 5.5% to 22%, with an average annual reduction of 11.5%. And seven companies experienced 10% or more annual reductions over the prior three to six years. Most of these higher performers (85%) had programs at the Advanced or Proactive/Advanced levels of maturity.

The results were also broken down by the safety system elements (see the chart below for detailed results by element):

Detailed Study Results by Safety Management System Element

Here are the detailed results of the Humantech study broken down by the criteria for four of the five safety management system elements. Note that there’s no column for Proactive as companies in this phase of maturity are in transition from Reactive to Advanced and thus possess qualities of both.

ELEMENT/CRITERIA	REACTIVE	ADVANCED
POLICY:		
Approach	Program owned by a few	Process owned by many
Overall Goal	Reduce injuries	Reduce exposure to MSI risk factors. Improve performance
Standard/Policy Content	General philosophy. Safety focus	Common expectations, roles and responsibilities, and metrics
PLANNING:		
Measures	Injury/illness. Discomfort	Reduction of MSI risk factors
Participants	Safety and medical	Operations, engineering management. Employee teams
Problem Identification	Injury stats. Subjective and qualitative assessment	Quantitative risk assessment
IMPLEMENTATION & OPERATIONS		
Ergonomics Program Lead	Safety and medical	Engineering, operations or CI
Training	General awareness	Skills and awareness specific to defined responsibilities
Controls: Existing Workplace	Guided by safety/medical staff	Driven by engineering and area management

Controls: New Equipment and Tools	Safety staff review and approve	Provide design criteria in planning phase. Use engineering design approval process
CHECKING & CORRECTIVE ACTION		
MSI Investigation	Standard injury investigation form	Standard investigation form plus MSI risk assessment
Validation of Risk Reduction		Follow up using quantitative assessment tool. Compare before and after
Accountability		Risk-based goals and measures tracked by business process. Departments held accountable
Review/Audit	General EHS audit	Process review based on requirements/standard

Policy. In reviewing the approaches used to establish and develop program direction and the content of the ergonomics programs' standards and policies, the study found that as company programs mature, they focus on managing the causes of MSIs and losses (such as exposure to risk factors), provide more specificity of expectations, define a clear common goal and tend to manage the program as a process.

Planning. In reviewing the approaches to planning, as ergonomics programs mature and become more effective, they tend to provide more specificity of expectations, a clear common goal and again tend to manage the program as a process.

Implementation and operation. The study found that mature ergonomics programs tend to integrate the risk assessment and solution design process with existing engineering systems, include specific design criteria during the engineering review processes, and provide skills training for engineers, process leads, assessors and senior management, aligned with their stated responsibilities.

Checking and corrective action. In reviewing the checking and corrective action approaches, the study found that mature programs typically refine their investigation of MSIs and conduct regular follow-up reviews of job improvements and program management.

Management review. All participating companies said the results of program reviews were evaluated by site management and that 86% of site management teams develop improvement plans (tactical and/or strategic) to address discrepancies identified during the review.

5 Keys to Program Success

The benchmarking study participants identified these five elements as key to the success of their own ergonomics programs:

1. Provide a clear and common goal for improvement, based on reduction of risk.

2. Establish site/business unit goals and measures based on the common goal of the organization.
3. Drive the process through top management, sponsorship and leadership.
4. Expand ownership/leadership of the program beyond safety to operations and engineering.
5. Conduct quantitative, follow-up assessments to validate that improvements were effective.

In addition, the study identified the most common practices of the seven participating companies with the highest rate of improvement (annual reduction of their injury rate of 10% or more). These best practices, which are similar to the key elements above, include:

- Manage ergonomics as an improvement process;
- Define the roles and responsibilities as to ergonomics for people at *all* levels of the organization, including workers, engineers, supervisors, etc., and not just safety staff and management;
- Establish a common leading goal for risk reduction and measures of results;
- Establish a program sponsor within senior level management who's accountable for the program's success; and
- Conduct follow-up assessments, using a quantifiable tool, to measure the effectiveness of workplace changes/engineering controls.

Study Results on Office Ergonomics

The Humantech study also looked more in depth at how the participating companies manage ergonomic issues in the office workplace, which has some characteristics that allow use of different methods and tools than those used in non-office tasks and workstations. In reviewing the management practices of office ergonomics, as company programs mature, they're trending toward online solutions and tools that enable and empower people to find and fix their own issues. This movement allows ergonomics specialists and team members to focus on areas, operations and individuals who need additional assistance.

OFFICE ERGONOMICS SPECIFIC RESULTS		
ELEMENT/CRITERIA	**REACTIVE**	**ADVANCED**
Workplace Design	Select equipment to fit the person	Select equipment that can be adjusted to fit the person
Awareness/Training	Classroom	Online, self-paced, hands-on
Problem Identification	In-person assessment	Initial assessments are self-assessments providing rules-based recommendations
Controls	Custom recommendations from in-person assessment	Rules-based recommendations tied to risk reduction