

The Chris Erhart Foundry and Machine Co., Cincinnati

Intervention Key Words: Disc Grinders, Ergo Handles, Cone Wheel Grinders, Lift Table, Vibration, Tool, Balancer

Industry: Manufacturing

Risk Factor: Awkward Posture- Back deviations, Wrist deviations, Awkward Posture- Squatting/Kneeling, Vibration-Hand/Arm, Vibration-Whole Body, Manual Handling- Pinching/Gripping, Lifting/Carrying, Pushing/Pulling

Situation:

The Chris Erhart Foundry and Machine Co. manufactures custom order gray and ductile iron castings. Cumulative Trauma Disorder (CTD) concerns have arisen with regards to the use of heavy grinding, chipping, and other pneumatic tools. These tools are used to perform job tasks associated with typical foundry operations. The employees are exposed to risk factors including the lifting of heavy products, the heavy weight of tools, fatigue from static posture, fatigue from standing on concrete flooring, vibration from tools used, shoulder abduction, hand and wrist deviations, forearm and elbow deviations, grasping of heavy tools, etc. These risks pose a serious threat for the development of CTDs.



Worker using manual grinder



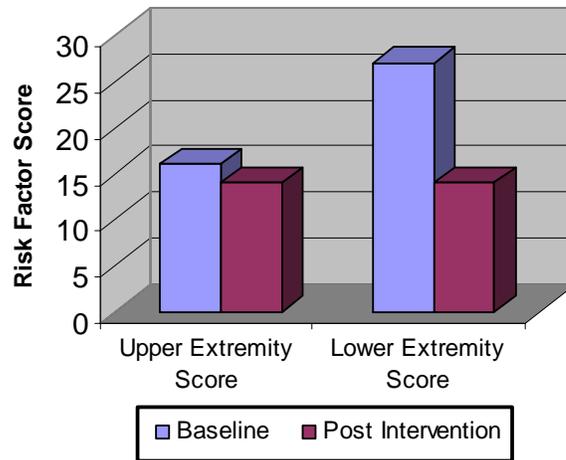
Depiction of tools used

Solution:

In order to address their CTD risk concerns, the Chris Erhart Foundry and Machine Co. purchased a variety of tools and accessories, including: 2 Disc grinders with ergo handles (vibration absorbing), 2 Cup wheel grinders with ergo handles, 2 Cone wheel grinders, 2 BTS workstations with 4000 lb. capacity-lift table and tool boom, and 6 tool balancers. Tool balancers support the weight of the tools while in use, decreasing the force and movements needed to operate the tool. This new equipment is intended to reduce the stress placed on workers, who must use the tools for 8 hours per day. The

total cost for the intervention was \$15,050. Erhart Foundry received \$11,700 in assistance from SafetyGrant\$ to offset the costs.

Results:



- CTD Risk Factor scores decreased 35% following the intervention.
- CTD Rate (standardized per 200,000 hours worked) decreased from 53 the year prior to the intervention to 0 over the 2 years following it.
- Lost Days and Restricted Days rates were at 0 before the intervention and remained at 0 for at least 2 years following.
- Employee Turnover decreased from 159.5 to 58.7 over the same time period. This equates to a 63% improvement.