

Micro Enterprises, Springfield

Intervention Key Words: Machines, Raise, Platform, Steel Box

Industry: Manufacturing

Risk Factor(s): Awkward Posture- Back deviation, Shoulder deviations, Repetitive motion

Situation:

Micro Enterprises manufactures products ranging from prosthetic heart valves to security safe components. Risks for Cumulative Trauma Disorders (CTDs) arise when employees work with CNC milling lathes. These machines can require loading up to 6 times per minute, for an 8 hour shift. In addition, workers must continuously bend in order to reach the spindle heads. Repetition, awkward postures and fatigue can all lead to CTD disorders.



Worker must bend to reach spindle head

Solution:

Micro Enterprises decided that the best approach to their CTD issues was to raise the CNC machines. In order to do this, they place an 8" steel box filled with concrete under each machine raising the machine to a more neutral level, encouraging a more natural, proper posture. Total cost of raising 4 machines equaled \$13,072. Micro Enterprises received \$10,458 in assistance from SafetyGrant\$ to offset the costs.



Raised machines reduce physical stress and fatigue

Results:

- Both CTD rate and Lost Days rate (standardized per 200,000 hours worked) decreased 100% in 2 years following the intervention from levels of 8.7 and 113.6 respectively the year prior.
- Restricted Days rate was at 0 the year prior to the intervention and remained at 0 for 2 years following.
- Employee Turnover rate decreased from 26.2 to 8.8 over the same time period, a 66% improvement.
- CTD Risk Factor Scores, averaged over 4 tasks, decreased 53% following the intervention.