Ergonomic Improvement - The Next Level – Worksheet

MSDs Are Ergonomic Related Injuries

Musculoskeletal Disorders is the proper scientific term but we will use MSDs instead. MSDs are injuries or pain and discomfort in the body’s joints, ligaments, muscles, nerves, tendons and structures that support the limbs, neck and back.

Ergonomic Improvement

“Ergonomic improvement is a process for reducing risk and preventing MSD injuries that cause pain and discomfort by effectively managing the movement of people, equipment, material and energy.”

Process

- A process is a series of steps developed and designed to achieve a specific result.
- It is never ending.
- It is continuous.
- It has inputs and outputs.
- Every time the process receives a good input a better output should follow.

Hazard

A hazard may be defined as – any source of danger. There are two major types of hazard. The first type is an unsafe behavior. The second type is an unsafe condition.

How Do MSDs Occur

An MSD is an injury or pain and discomfort that happens over time because of unsafe conditions and unsafe behaviors.

Learning to Recognize Danger

Therefore, based on actual life events, we develop skills to keep safe.
In Addition
We also develop skills to keep safe by **listening** to and **watching** our elders handle potential dangers.

**What is the Best Way to Prevent MSDs?**

- Recognize and manage the **postures** that cause them
- Manage the **repetitive movements** that cause them

**Wrist Postures and Movement**

<table>
<thead>
<tr>
<th>Neutral Posture</th>
<th>Awkward Postures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>View #1</strong></td>
<td>Radial Deviation</td>
</tr>
<tr>
<td>(minimal radial/ulnar deviation)</td>
<td></td>
</tr>
<tr>
<td><strong>View #2</strong></td>
<td>Flexion</td>
</tr>
<tr>
<td>(minimal flexion/extension)</td>
<td></td>
</tr>
</tbody>
</table>
Elbow Postures and Movement

Neutral Posture

Awkward Postures

Elbow Flexion

Elbow Extension

Shoulder Postures and Movement

Neutral Posture

Awkward Postures

Shoulder Flexion

Shoulder Extension

Shoulder Abduction

Shoulder Abduction & Extension
Neutral Posture and Movement

Neutral Posture

Awkward Postures

Neutral postures produce the least stress on the body while awkward postures produce the most stress.

The Four Factors That Influence Ergonomic Injury

Posture is a factor which can produce physical stress. The remaining three factors are duration, force, and frequency.

This Is What Works

- All of your projects must address three words. They must be practical, feasible and realistic. This is the key to success.

  - Practical = it can be done

  - Feasible = it makes sense to do it

  - Realistic = it is within the capability of the organization to get it
Sage Advice

"Continuous Improvement" is better than delayed perfection."

"Perfect is the enemy of good."

Five Steps to Improvement

1. **Identify** an awkward posture

2. **Determine** what can you do to -
   - Improve the posture
   - Reduce the force
   - Reduce the duration
   - Reduce the frequency

3. **Document** your improvement

4. Recognize, communicate and share your success

5. Repeat steps 1-4