

# Recommendations for Prevention: Worker Injuries Caused by Repetitive Motion

## THE PROBLEM:

Musculoskeletal injuries (bones, muscles, ligaments, tendons, and nerves) are common and preventable among dairy workers. In large-herd operations in the Western United States, over 3/4 of dairy workers reported these injuries over a one year period.



## REPETITIVE MOTION INJURIES: [noun]

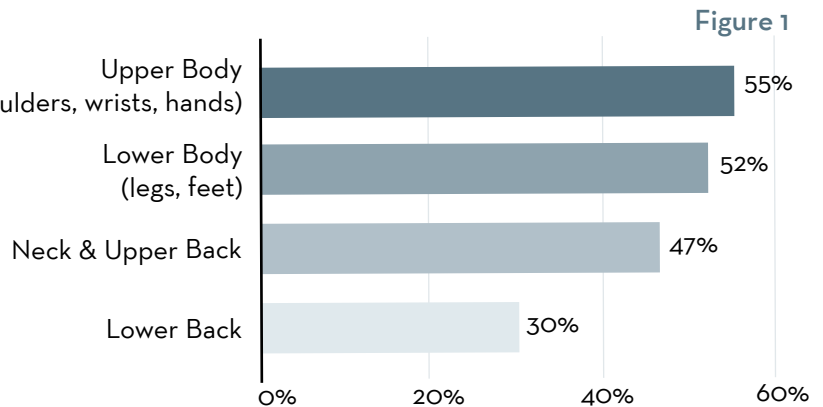
Injuries due to performing the same motion over and over. These conditions are due to overuse, without adequate recovery. Low back strain due to repeated lifting, especially with poor technique, is an example.

- Suzanne Tanner, M.D. (Mayo Clinic)

Injuries may be related to repetitive motion, high muscle force, and awkward posture. Fatigue, due to long shifts, unusual hours, and especially hot, cold, or wet conditions, places workers at a higher risk for injury.



See Figure 1: Prevalence of Reported Musculoskeletal Injuries by Body Location



## RECOMMENDATIONS:

Preventing musculoskeletal injuries in the work environment can lead to improvements in worker wellbeing and performance, milk production, and cow health.

Not all dairy farms are the same, but the following strategies have been used on some dairy farms to reduce and prevent these injuries. These strategies prevent workers from keeping the same posture for a long time and from stressing the same muscles repeatedly.

- When planning shifts and workflow, add rest periods and assign a variety of different types of tasks to help prevent fatigue. Use lightweight materials and machinery when possible.
- Encourage workers to wear proper footwear with enough cushioning.
- Place commonly used items within 17 inches of the worker and at or below the shoulder height of workers so that they do not have to reach far or overhead.

### EXAMPLES:

- Place a bucket of wipe towels on a cart in a central location so that workers do not have to walk long distance or maintain awkward posture.
- Provide a small platform for workers to stand on so that workers do not have to reach overhead.
- Provide dip cups or sprays with an arm to disinfect teats, so that workers do not have to reach.

### CONSIDER INSTALLING:

- Anti-fatigue, anti-slip flooring in the milking parlor (instead of concrete flooring) and replace when worn to ensure full shock-absorption benefits.
- A support arm with automatic takeoffs (ATO) to reduce lifting load of the arm when attaching clusters.
- Early findings suggest that “rotary style parlors...may be more beneficial to the health and performance of the worker, as compared to parallel or herringbone parlors”.

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