

# Michigan Municipal Workers' Compensation Fund Safety and Health Resource Manual

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## A Basic Plan for Preventing Back Injuries

### Overview

Today, back injuries are the most prevalent type of workplace injury. Over 2 million injuries occur annually and experts estimate that 8 out of 10 Americans will suffer a back injury sometime during their lives. In addition, slowed production, increased turnover and medical bills that can be attributed to low back pain make back injuries the most expensive medical problem for industry. Each year employers experience approximately 10 million dollars in losses due to back injuries. Members of the Michigan Municipal League's Workers Compensation Fund share in this negative trend and have recognized the need to address this issue.

### Occupational & Non-Occupational Causes for Back Pain and Injury

Numerous factors can contribute to or aggravate low back injuries and pain. The major occupational causes are:

- **Physical work.** Blue collar workers suffer significantly higher rates of low back pain, absenteeism, and symptoms of sciatica (pain radiating down the leg) than white-collar workers. The higher injury rate results from the greater frequency with which such workers lift objects.
- **Bio-mechanically stressful postures.** These postures, which include twisting at the waist, prolonged static postures, such as forward bending and prolonged sitting, result in a five-fold *increase* in low back pain.
- **Whole body vibration of low frequency** (4 to 10 hertz). Operators of autos, trucks and heavy construction equipment frequently experience this type of vibration. There is substantial data that shows that workers in these categories have significantly higher rates of serious back pain.
- **Direct trauma to the spine**, generally as a result of falls, accounts for 8 to 15% of all serious low back pain and spinal fractures.



In addition, age and lack of fitness are non-occupational causes that contribute to the development and severity of low back pain.

Employers can protect themselves and their employees from back injuries. Prevention and education are the keys. Making changes in the workplace, educating employees about using proper lifting and material handling techniques and encouraging employee wellness all help assure many hours of work and play without pain.

### Concepts in Prevention

Is low back pain preventable? The answer is "yes and no." Occupational epidemiology indicates that a substantial amount of low back pain will occur even if the level of physical stress is low. At the same time, research in ergonomics and biomechanics strongly suggests that improved workplace design and appropriate engineering controls can prevent one third of occupational low back pain. Measures employers can take include:

- Reducing mechanical spinal loading to within or near National Institute for Occupational Safety and Health (NIOSH) criteria;
- Minimizing high stress postures, low level lifts, axial trunk rotation, static postures, asymmetrical movements under load;

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- Matching worker abilities to job performance requirements; and
- Administrative controls such as job rotation.

Taking these steps can dramatically reduce the frequency and severity of back injury related workers' compensation claims. In addition, improved workplace design can allow many more workers to perform their normal -- or alternative tasks -- even when they are experiencing low back pain.

### Wellness

Real prevention begins with education. Employees need to know that low back pain is a "disease" common to most people. They need to understand that it is only partially preventable through improved work methods and workplace design. Most of all, they need to learn the things they can do to protect themselves.

An education program that stresses proper lifting and material handling techniques and the importance of proper diet and exercise to back health is essential to reducing the number and severity of back injuries. Instituting a wellness plan can encourage employees to take responsibility for their health. Wellness plans give employees information about health and fitness. They may also provide employees with the facilities they need to achieve fitness.

A complete fitness program, including stretching, strengthening and aerobics exercises, is important to a healthy back. It is essential to condition all the muscles that help support the spine. Strengthening the large muscles in the arms, hips and legs helps to compensate for muscular weakness in the back.

Because fitness is so important, we recommend that management:

- Seriously consider enrolling employees in an accredited wellness program.
- Encourage employees who want to participate in a wellness program. Encouragement can take the form of recognition, incentives, facilities or equipment.

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### Back Injury Prevention Self-Assessment

One of the most common employee injury complaints is back pain. Back pain often results in high medical expenses, lost work time and productivity as well as permanent disabilities. It is important, therefore, to identify back pain as a problem and seek measures to reduce the cause of injuries as much as possible.

#### Does your organization:

1. Have a plan to reduce these major causes of lower back pain?

Yes  No  →



#### *Some causes of back pain include:*

- Repeated or excessive physical work.
- Stressful postures such as twisting, static postures, or prolonged bending.
- Whole body vibration from equipment.
- Direct trauma to the spine from falls.

2. Taken other preventive measures?

Yes  No  →



#### *Do you:*

- Match worker ability to job requirements?
- Install administrative controls where appropriate?
- Identify factors that may aggravate back pain?
- Train employees in ways to reduce back pain?
- Encourage employee participation to reduce injuries?
- Investigate employee injuries and determine cause?

3. Have a back injury prevention plan?

Yes  No  →



#### *Does the plan:*

- Identify factors that may cause back pain;
- Train employees on proper lifting techniques;
- Train employees on procedures to reduce stress to the back; and
- Encourage employees to practice healthy habits on and off the job?

4. Have an established an employee Wellness Program?

Yes  No  →



#### *An effective Wellness Program includes:*

- Educating employee of the hazards and how to prevent injuries.
- Providing employees with information on health and safety.
- Encouraging fitness programs through incentives.
- Providing fitness opportunities.
- Utilizing an accredited wellness program.

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### Conclusions



If you were able to honestly answer “yes” to all four of the above questions and your organization follows most or all of the suggested practices, then your organization has reduced its exposure to future claims. You should congratulate yourself.



If you were unable to answer “yes” to one or more of the four critical questions, your organization may have a greater exposure to back injury claims. Missing components of one or more of the recommended practices may also indicate a deficiency in your current program. You should take one or more of the following actions:

- Correct any deficiency that may exist.
- Contact the Michigan Department of Labor, SET Division at 517/322-1809.
- Contact MML Risk Management Services at 800/653-2483; or
- Contact the League's Loss Control at 800/482-0626.

Important Telephone Numbers	
Michigan Department of Labor, SET Division	517/322-1809
MI. Dept. of Public Health, Bureau of Occupational Health	517/335-8250
MML Risk Management Services	734/662-3246 800/653-2483
Loss Control Services	800/482-0626

#### NOTE:

This document is not intended to be legal advice or implied to identify all back injury or other employee health and safety-related exposures. Public agencies are encouraged to contact their health care professional for assistance in implementing these or other changes.