IRSST Study Links Obesity to Increased Risk of Suffering MSIs



Studies on obesity and workers aren't new. For example, studies have found:

- A tie between work conditions and obesity
- That obesity costs employers more than smokers
- Obese workers are more at risk of suffering a disabling workplace injuries
- Work-related injuries are far more costly if the injured worker is obese.

Adding to this body of evidence is a recent study from Québec's IRSST that looked at the links between obesity and musculoskeletal injuries (MSIs), specifically back injuries.

The risk of back injuries at work is very high and the workers most at risk for such injuries are those who handle materials. But the study noted that there's little evidence on the impact of obesity on the way handling tasks are performed. So the researchers set out to analyze the work strategies of obese material handlers and compare them to those of material handlers of a healthy weight.

They looked at the biomechanical and ergonomic impacts of 17 obese handlers and 20 healthy weight handlers while transferring boxes from a conveyor to a hand truck and vice versa. The researchers noted:

- The load's weight
- Pick-up and deposit height
- Configuration of the work area
- Moments of force on the back
- Workers' posture
- Their box movement, such as how close or far from the body they held the box.

The researchers found that the obese material handlers experienced greater (>23%) maximum lumbar loading during the lifting and depositing of boxes on a hand truck or conveyor. In addition, their weight explained 57% of the variation in the transverse maximum moment of force on the back when raising a box from the ground.

Bottom line: The results suggest that a worker's obesity leads unavoidably to a significantly greater effect on the back's musculoskeletal structures, thus exposing obese material handlers to a greater risk of developing an MSI during load handling.

Obesity is an emerging problem that impacts workplace safety. And because there's been a sustained increase in the obesity rate of workers in Canada, safety professionals can't ignore the safety issues raised by workers' weight.

To help you manage and protect overweight workers, use these OHS Insider resources:

- A report from Statistics Canada on the prevalence of obesity among adults in Canada and the US
- A recorded webinar on managing overweight workers
- A quiz on treating workers adversely because of their weight.

And at Safety Smart, you can download a safety talk on winning the war on weight and an article on obesity and workplace safety.