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Volume 4 Issue 2

April 2008

ADVOCATE'S GATEWAY

Occupational Health Clinics for Ontario Workers Inc. (OHCOW), Sudbury, Ontario

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Low Back Injuries Associated With Bricklaying

It is well known that working as a bricklayer is a physically demanding occupation. Several studies have identified low back injuries as a major concern in construction work (Sturmer et al., 1997; Holmstrom et al., 1992), however, more specifically, low back injuries in bricklaying (Van der Molen et al., 2008; Anton et al., 2005; Van der Molen et al., 2004; de Jong et al., 2003; Cook et al., 1996). Holmstrom et al., 1992 showed that of all construction workers, masons are among the most affected by musculoskeletal disorders (MSD). Bricklayers have high rates of low back injuries, 45% (Arbouw, 2001 – in Van der Molen et al., 2004), 47% (Sturmer et al., 1997), and 72% (Cook et al., 1996).

Bricklaying involves large amounts of manual material handling. Miedema and Vink (1996) (in de Jong et al., 2003) assessed bricklayers and bricklayers' assistants (work teams with a ratio of 3:1) and showed that bricklayers handle about 800-1000 bricks per day and the bricklayers' assistants manually transport about 2400-3000 bricks per day. Anton et al. (2005) determined that masons typically lay 165 standard weight blocks (16.3 kg) and 185 low weight blocks (11.8 kg). In a recent study, Van der Molen et al. (2008) showed that workers moved an average of 294 (11 kg), 261 (14 kg), and 240 (16 kg) blocks. The number of blocks handled ranged from 150-426 (11 kg), 193-370 (14 kg) and 149-339 (16 kg).

Cook et al. (1996) conducted a survey related to MSD. They determined that workers attributed awkward or cramped positions; working in the same position for long periods of time; bending or twisting the back; reaching overhead or away from the body; and carrying, lifting or moving heavy materials or equipment as job factors that pose a concern for injury. Miedema and Vink (1996) (in de Jong et al., 2003) showed that bricklayers flex and rotate their back and neck about 800-1000 times per day when bricks are lower to the ground. Figure 1 shows an illustration of a worker in an awkward position that is very typical during bricklaying.

Figure 1: Bricklayer in an awkward forward flexed and rotated position

Source: De Jong et al., 2003.

During one-handed bricklaying tasks, Jager et al. (1991) showed that the lower the grasp height, the greater the brick mass, and the shorter the placement time, the higher the compressive load on the lumbar spine. Compressive loading is a well known risk factor for injury (NIOSH, 1981; Waters et al., 1993) and has been used extensively in research studies to determine the risk of injury. McGill (2004) mentioned that there are additional spinal loading variables that affect the spine and place the spine at a greater risk of injury. These include axial twisting, forward bending and working above shoulder height and below knee height.

Sturmer et al. (1997) conducted a study of construction workers. A total of 571 workers who were classified as bricklayers, house painters, carpenters, concrete builders and unskilled or other were assessed. Bricklayers comprised 237 of this selection of workers. Overall, 47% of these bricklayers had low back pain. It was shown that bricklayers who have worked for more than 10 years in that profession were found to have a 2.3 times greater risk of developing back pain compared to the other construction workers.

Anton et al. (2005) assessed the effects of block weight (16.3 kg and 11.8 kg) and wall height on electromyographic (EMG) activity and heart rate of

Low Back Injuries Associated With Bricklaying - Continued

masons. They showed that block weight significantly affected lumbar erector spinae muscle activity, however, when using a heavier, standard weight block (16.3 kg), muscle activity did not always increase. This illustrates that movement techniques vary between different block sizes. Spinal loading is increased depending on the movement techniques used.

In a recent study, Van der Molen et al. (2008) showed that bricklayers spend 35% of their day laying blocks and another 22% involved work preparation (moving and carrying blocks to the wall, mixing mortar, etc.). The study assessed 11 kg, 14 kg and 16 kg blocks and determined that none of these block weights affected productivity, duration or frequency of tasks, energetic workload, or cumulative spinal load over a full work day. This illustrates that workers keep a steady pace when working and are subjecting their bodies to extreme levels of physical stress in order to maintain a constant work pace. Van der Molen et al. (2008) concluded that working with the three block weights exceeded ergonomic criteria for work demands, including cumulative spinal load (amount of load on the spine over the work day, work week, month, year, or lifetime).

Scaffold Work

Elders et al. (2004) showed that 60% of scaffolders have low back injuries and that there is a high rate of work absence due to low back pain. Injuries are typically due to strenuous arm movements, particularly over head. Bricklayers erect and dismantle scaffolds frequently. Therefore, this is another risk factor for injury due to the large planks and the awkward overhead reaching.

Literature review completed by:
Steve MacDonald BSc CK
Ergonomist

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Referral Form Changes

Changes have been made to our referral form that will clear up questions we referrals. Please go to our site www.ohcow.on.ca/clinics/sudbury for our new one.

Over the years we have received questions from Clients such as “why am I referred here”, “who are you”, “why do you have my information” and the fact we often have to return forms to Clients who have not filled in pertinent information, we have decided to forward our forms to you, the Advocate. This enables you, their Advocate to help your Client fill in the information and clear up any questions regarding the referral. If your Client is from out of town, you can contact them and fill in the info over the telephone and send them the forms that need to be signed. We believe that if the Advocate helps the Client with the information there will be a better understanding of what OHCOW does and will ensure that all the information is filled in properly.

Pulmonary Sarcoidosis

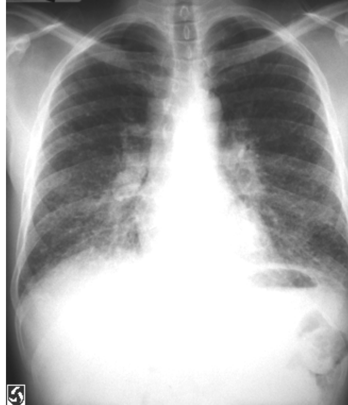
What is sarcoidosis?

Sarcoidosis is a disorder that can affect many parts of the body especially the lungs, lymph nodes, skin, eyes, liver, and spleen.

The lungs are affected in more than 90% of cases. This is known as pulmonary sarcoidosis. Sarcoidosis causes inflammation of body tissues. It also causes lumps of cells to form in the organs. These lumps are known as granulomas.

What causes sarcoidosis?

The cause of sarcoidosis is not known. Over the years, there have been changing ideas about what may cause sarcoidosis. One theory is that sarcoidosis develops when a person is exposed to a certain unknown toxin in the environment or workplace.



Pulmonary Sarcoidosis—Stage 2
Source: BrighamRAD

Who is at risk for sarcoidosis?

Anyone can develop sarcoidosis. It affects people from every race, sex, and age. Sarcoidosis is most common in people between the ages of 20 and 40. It is also more common in women. Sarcoidosis is most common in people of African-American and Scandinavian origin. It is not contagious.

What are the symptoms?

Many people who have sarcoidosis do not have any symptoms, whatsoever. Some people may experience symptoms that are common in other diseases.

These symptoms include a low grade fever, feeling tired, having trouble sleeping, and weight loss.

Symptoms that may be present when sarcoidosis affects the lungs include shortness of breath, dry cough, and chest pain. Other symptoms of sarcoidosis include bumps or sores on the skin, as well as enlarged lymph nodes. Sarcoidosis can cause visual problems like blurred vision, burning and redness of the eyes, and seeing black spots.

How does sarcoidosis progress?

With mild sarcoidosis, a person may develop swelling of the body tissues and grow lumps of cells, called granulomas that grow initially but can shrink or stop growing, altogether. Often in mild cases of sarcoidosis, the symptoms may disappear entirely, within a few years.

When a person has severe sarcoidosis, it continues to worsen over time. This form of sarcoidosis can cause organ damage that cannot be reversed. The disease may leave scar tissue in the lungs. It may be harder for a person to breathe, because scar tissue makes the lungs stiff and harder to fill with air. Treatment is helpful in severe cases.

How is sarcoidosis diagnosed?

A diagnosis of sarcoidosis can be made when other possible causes are ruled out. There is not a specific test that is used to diagnose sarcoidosis. To look for signs of sarcoidosis, a health care provider is likely to start by taking a medical history and by performing a complete physical exam.

Some tests that may be used to arrive at a diagnosis include a chest x-ray, lung function tests, or a tissue biopsy. A CT scan of the chest and blood tests may also be performed.

How is sarcoidosis treated?

People who need treatment are given medication to reduce inflammation of the body tissues. People are also given treatment to slow the growth of granulomas. Treatment also promotes good function of the lungs, helps prevent organ damage and helps reduce symptoms of sarcoidosis.

Sarcoidosis is most often treated with corticosteroids such as prednisone.

Literature review completed:
Krystal Fleck, Student Nurse

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WHY DO THIS NEWSLETTER….?

In our catchment area, we are hearing from many advocates that they are feeling isolated. In providing this newsletter OHCOW is striving to reduce this isolation, and enhance communication networks amongst advocates and OHCOW. It is hoped that OHCOW can provide more support to each advocate by providing up-to-date information on current health and safety topics.

OHCOW — Who We Are? How & Who Can We Help?

We're on the web!
http://www.ohcow.on.ca/clinics/sudbury/

OHCOW is a valuable occupational health related resource that is available to your members at no cost. The Occupational Health Clinics for Ontario Workers (OHCOW) were established in 1989 and are funded by the Workplace Safety and Insurance Board (WSIB). There are clinics in Hamilton, Toronto, Sarnia, Windsor and Sudbury. Staffed by a multi-disciplinary team of specially trained occupational health doctors, occupational health nurses, occupational hygienists, ergonomists, researchers, and administrators, each OHCOW clinic provides comprehensive occupational health services and information. Our mandate is the prevention of occupational illnesses and injuries. We do this through the identification of the causes which have led to illnesses and injuries. This also provides us with a window into the workplace.

In order to carry out our work we partner with, among others, public health officials; universities; the Ministry of Labour; the Ministry of Health; the Workplace Safety and Insurance Board (WSIB); and organizations such as cancer coalitions. OHCOW works with medical and nursing schools to, provide occupational education to medical and nursing students. We also work with unions holding clinics for workers about illnesses which they think might be work related. In short, we have the experience, the knowledge and the credibility to assist you.

OHCOW Sudbury Website

Did you know that OHCOW Sudbury updates its website on a monthly basis? Each month features a new article written by an OHCOW staff member on current issues within occupational health and safety.

The website also contains information regarding past case studies, research projects, staff biographies, games & tests, past articles on health and safety issues, and information on education seminars that OHCOW offers.

Check it out!!!
http://www.ohcow.on.ca/clinics/sudbury

What Do You Think?

We welcome feedback for generating topics that would be of interest to advocates. Please forward any question or suggested topics to be covered in future issues either by e-mail, phone or fax by using the contact information below.

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