

# 1 Musculoskeletal Disorders



The term **MSD** covers any injury, damage or disorder of the joints or other tissues in the upper/lower limbs or the back. This website provides advice to prevent and manage MSDs, including tools to assess the risks of manual handling and repetitive tasks.

## . Lower limb disorders

Lower limb disorders (LLDs) affect the legs from hips to toes. The most common risk factors at work are:

- repetitive kneeling and/or squatting
- **fixed postures such as standing for more than two hours without a break**
- frequent jumping from a height

### How much of a problem are they?

About 20% of all work-related musculoskeletal disorders affect the lower limbs. In 2009/10 an estimated 94,000 people in Britain who had worked in the last 12 months suffered from an LLD caused or made worse by their work. Of these, an estimated 30,000 were new cases, which is about 100 out of every 100,000 workers in Britain.

HSE estimates that each case of LLD means a worker taking an average of 25 days off work; about 2.4 million working days were lost because of LLDs in 2009/10.

Research suggests that 50% of cases of surgically-treated knee osteoarthritis (OA) and 30% of surgically-treated hip OA were related to occupational factors.



For more information click on the links below:

## 2 What are lower limb disorders?

**Lower Limb Disorders (LLDs) at work affect the hips, knees and legs** and usually happen because of overuse - workers may report lower limb pain, aching and numbness without a specific disease being identified.

Acute injury caused by a violent impact or extreme force is less common. However, athletes and military personnel are more prone to these injuries so workers who take part in these activities may report them at work.

Scientific evidence suggests that there are several recognised diseases of the lower limb which can be work related such as: hip and knee osteoarthritis; knee bursitis, meniscal lesions/tears; stress fracture/reaction injury and varicose veins of the lower legs.

### Osteoarthritis (OA)

Osteoarthritis (OA) is a degenerative condition that affects the joints of the body (eg knees, hips and spine), and happens when the cartilage coating at these joints becomes damaged or worn away. Hip OA is more common among male than female workers and farmers have a significantly higher risk of suffering from it. There is a significantly increased risk of knee OA among miners, floor layers and cleaners.

### Knee bursitis

Knee bursitis - also called coal miner's, carpet layer's or housemaid's knee - is caused by repetitive kneeling or knee-straining activities. Workers who develop bursitis generally report tenderness and swelling, and a reduction in knee movement due to pain and tightening of the skin over the kneecap.

Beat knee or hyperkeratosis is the thickening of the skin over the knee due to pressure. It is an acute and extreme form of bursitis and is common among those regularly involved in knee-straining activities, such as kneeling and squatting.

### Meniscal lesions/ tear damage

If the knee is bent or twisted while bearing a load, the force may cause meniscal lesions or damage to occur. Overuse trauma, for example repetitive squatting or kneeling, can also cause meniscus injury or damage. Such damage leans toward the injured knee being inclined to degenerative changes typical of OA.

### Stress fracture/stress reaction injuries

Stress fracture and reaction injuries are the result of repeated micro-injuries to bone, typically found in those who regularly undertake marching or stamping of the feet. They are more common in people undergoing military training and in athletes, particularly long-distance runners.

# Varicose veins

Varicose veins are any dilated subcutaneous veins of the leg. Employees may complain of feelings of heaviness and pain, a sensation of swelling of the legs, night time calf cramps and restless legs. These complaints can increase during the day, especially after prolonged standing.

## Lower limbs: Information for employers

Effectively managing lower limb disorders (LLDs) can bring business benefits to your organisation.

LLDs are a major cause of sickness absence accounting for, on average, 25 days' absence per incident. By managing the risks, you can reduce the number of people taking sickness absence and also the average length of each absence.

If you do not manage the risk of LLDs to your workers, you run the risk of legal action and possible compensation costs (in addition to potentially greater staff sickness absence).

Check MSD - [Risk assessment](#)

## Preventing LLDs

**Because most injuries happen as a result of overuse, the most effective way to reduce risk is to design work so that overuse is avoided. This can be done by, for example:**

- providing mechanical aids
- **using staff rotation to lessen the time spent carrying out 'risky' tasks**
- **using regular breaks**
- **providing seating, where possible**

**Speak to the people carrying out these tasks – they understand what causes them problems. More effective reductions are usually achieved if employees are consulted first.**

## Personal protective equipment

Knee pads: These are useful for protection while kneeling on hard floor surfaces, but they do not mitigate the risks of extreme flexion of the knee. Their benefit is largely in respect of preventing lacerations and penetrating injuries, and improving comfort. It is not known whether they reduce the risk of osteoarthritis (OA).

Anti-fatigue matting: There is some evidence that anti-fatigue matting may be effective in reducing the risks from prolonged standing. However, the use of mats in the workplace requires careful consideration because of the increased risk from slips and trips.

# Lower limbs: Information for employees

If you think you may be suffering from a lower limb disorder (LLD) that may be caused or aggravated by your work, there are things you can do to help yourself and assist your employer in helping you.

## What to look for

The symptoms you should be particularly aware of are:

- pain and/or
- restricted joint movement

If you experience either of these symptoms, you should seek medical advice because some lower limb injuries, if recognised early, can be treated with minimal medical intervention, while others may require surgery (i.e. meniscal tears). Conditions like osteoarthritis may require regular clinical intervention.

## Report symptoms to your employer early

It is important that you report any symptoms as soon as possible because help could be available and early intervention often prevents further damage. By reporting symptoms early, your employer can assess whether there is a problem and may want to observe your job. Other workers may be experiencing similar problems and, unless you tell someone, the problem may not be realised.

## What your employer can do

Once your employer knows about problems in the workplace they should be able to do something to reduce the risk of it getting worse.

Adaptations may need to be made, for example to the tools/equipment you use or the way your work is organised. These changes may be permanent and apply to a group of workers, or temporary and specific to you as an individual when dealing with a current problem or recovering from your symptoms.

## Occupational health advice

Your employer may be able to refer you to an occupational health service provider for some medical help.

An occupational health service provider will:

- assess your symptoms and may diagnose a specific condition, if you have one
- ask about your work tasks to try and identify the things contributing to the problem

If your workplace does not have access to this type of support, you should see your GP to explain your symptoms and the type of work that you do. Although they may or may not be able to diagnose your condition, they can provide some help and advice or may refer you to a specialist health professional – especially if some form of clinical intervention is required.

# Legislation covering MSDs

There are several pieces of legislation relating to musculoskeletal disorders, which attach responsibilities to both employers and employees. The main legal responsibility for employers is to protect the health and safety of their employees and other people who might be affected by what they do, as required by the Health and Safety at Work etc Act 1974. Some health and safety regulations are particularly relevant to dealing with musculoskeletal disorders in the workplace (the main ones are listed below). However, if you work within specific industries there may be additional legislation you may have to take into account