Safety & Wellbeing
Policy Arrangement

Section 31 – Ergonomics in the Workplace

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Contents

Further guidance on this matter can also be obtained from the safety team at healthandsafety@northlan.gov.uk

1. Introduction

Ergonomics at Work is defined as being the study of work and its environment and conditions in order to achieve a maximum efficiency at no loss to the health and wellbeing of the employee. Musculoskeletal Disorders (MSD's) can, but not always, be a consequence of poorly designed systems of work, repetitive movements of limbs, muscles and joints in a dysfunctional manner affecting the wellbeing of the employee. It may also be associated with poor working techniques over a prolonged period or using work equipment beyond the *individual capacity* of the employee.

7.6 million working days were lost in 2010/11 due to Musculoskeletal Disorders (MSDs). (Source HSE)

75% of the new work-related conditions in 2010/11 were musculoskeletal disorders or stress, depression and anxiety with approximately 40% of disorders affecting the back, and 40% affecting the upper limbs (source HSE).

The term MSD covers any injury, damage or disorder of the joints or other tissues in the upper/lower limbs or the back.

The signs and symptoms of MSDs are recognisable as the following sensations around the affected region of the body i.e. aching; burning; cramping; loss of colour or blanching; numbness; pain; swelling; stiffness; tingling; weakness. The condition persists or returns when the activity or task is undertaken.

MSDs are medical conditions that generally develop over a period of time and do not typically result from a single traumatic event such as injuries caused by slips, trips, falls, over-stretching etc. and can differ in severity from mild periodic symptoms to severe chronic and debilitating pain.

The occurrence of an MSD is associated either with prolonged and gradual exposure to a risk, or an individual's incapacity to carry out the requirements of a task properly, or effectively, to the detriment of their wellbeing. It is therefore the responsibility of the employer to assess the Ergonomics of the workplace surrounding the performance of the work task and the environment in which it takes place.

It should not be overlooked in any Ergonomic Assessment undertaken that a person suffering from musculoskeletal disorders may be affected due to non-work activities such as gardening, house cleaning, home repairs, moving furniture, sporting activities etc. It is also worthwhile comparing exposure between two or more people performing the same task to identify areas which may be worth addressing.

2. Statement

The Council recognises the risk of developing, over a period of time, Musculoskeletal Disorders (MSDs) associated with a lack of consideration of ergonomics in planning and implementing work tasks and systems of work when undertaking Council operations.

Assistant Chief Executives will ensure that a system is in place to identify areas requiring ergonomic assessment and that where necessary appropriate steps are taken to correct the situation within the workplace or working environment. Service arrangements will include consideration of appropriate ergonomic risk assessments and control measures including the following:

- Pre-employment screening to determine the suitability of persons for certain work which may be considered overly demanding or exacerbate a known physical or mental incapacity of an individual;
- Provision of work equipment, seating and working arrangements which take account of the *individual* characteristics of the jobholder;
- Provision of appropriate Information, Instruction, Training and Supervision of the employee in the correct use of the work equipment before the work is undertaken for the first time;
- Ensure that the tools and work equipment to be used and personal protective equipment issued is appropriate to the individual physical capability and characteristics of the employee;
- If an employees work ability should change and they be seen to be experiencing MSD symptoms then the job factors/layout/equipment used should be subject to an ergonomic risk assessment/re-assessment or they be given a medical referral to the Council's Occupational Health Provider.

3. Implementation

Where applicable, each Service should implement these arrangements, or in consultation with the Council Health and Safety Officer, an adaptation of the arrangements more suitable for operational needs. A copy of the Service arrangements will be lodged with the Business Organisational and People Solutions.

4. Related Arrangements Sections

There are other related Policy Arrangements Sections which have a bearing on musculoskeletal risks and these are:

AS10 - Display Screen Equipment;

AS11 - Manual Handling of Loads;

AS18 - Personal Protective Equipment;

AS21 - Stress at Work; and

AS26 - Hand Arm Vibration.

The above documents carry their own individual checklists and risk assessment procedures and may be usefully consulted where appropriate.

5. Ergonomics Assessment

The need for ergonomic assessments relates to all workplaces and work equipment. It is recognised that DSE Assessments, Manual Handling Assessments etc. have a part to play, however there may be situations where other ergonomics issues require further risk assessment. Thus there may well be a need to consider, as established through the general risk assessment programme, a specific ergonomic assessment of some work activities.

To assist the person undertaking the risk assessment, an Ergonomics Assessment Form is included in Appendix 1 with Possible Control Measures given in Appendix 2. Since the Ergonomic Assessment requires to be *individual to the employee* it needs to record the employee's description of the painful areas of the body affected and so this is included in Appendix 3 "Ergonomics - MSD Symptoms Checklist".

Additionally the assessment process may need to be applied to the driving tasks. In circumstances where employees are driving on a more than casual basis then serious consideration should be given to the need to undertake formal ergonomic assessment of the driving position. (see Appendix 5)

Whilst a number of the risk factors associated with ergonomics of a workplace should be identified within the general risk assessment, a number of more specialist assessment techniques can be used. These alternative assessments will build upon the existing risk assessment(s) and help identify personalised risk reduction measures. The Service health and safety team should be contacted if localised risk assessments have been unable to minimise employee concerns.

6. Psychosocial Risk Factors

Physical risk factors such as force, posture and repetition can be harmful to the body and may lead to employees developing musculoskeletal disorders. However, research has shown that psychosocial risk factors also need to be taken into account.

Psychosocial risk factors are things that may affect worker's psychological response to their work and workplace conditions (including working relationships with supervisors and colleagues). Examples are:

- high workloads
- tight deadlines
- lack of control of the work and working methods

As well as leading to stress, which is a hazard in its own right, psychosocial risk factors can lead to musculoskeletal disorders. For example, there can be stress-related changes in the body (such as increased muscle tension) that can make people more susceptible to musculoskeletal problems, or individuals may change their behaviour, for example, doing without rest breaks to try to cope with deadlines.

So both the physical and psychosocial factors need to be identified and controlled in order to have the greatest benefit. The best way to achieve this is by using an Ergonomic approach which looks at achieving 'best fit' between the work, the working environment and the needs and capabilities of the workers.

Many jobs are not well designed and include some or all of the following undesirable features which may lead to psychosocial risks:

- workers have little control over their work and work methods (including shift patterns);
- workers are unable to make use of their skills;
- workers as a rule, are not involved in making decisions that affect them;
- workers are only expected to carry out repetitive, monotonous tasks;
- work is machine or system paced (and may be monitored inappropriately);
- work demands are perceived as excessive;
- payment systems encourage working too quickly or without breaks;
- work systems limit opportunities for social interaction;
- high levels of effort are not balanced by sufficient reward (resources, remuneration, self-esteem, status).

The considerations above relate to all workplaces and work equipment and there is an expectation that, if not already assessed under the terms of another assessment (see paragraph 4), then there will be a need to consider, as identified through the general risk assessment programme, a specific ergonomic assessment of some work activities.

7. Control Measures to Reduce the Risks of Psychosocial Factors

As with physical risk factors, psychosocial issues are best addressed with full consultation and involvement of the workforce. Consider the following control measures that can often be applied to improve the working environment:

- reducing the monotony of tasks where appropriate
- ensuring a reasonable workload (neither too much or too little), deadlines and demands
- ensuring good communication and reporting of problems
- encouraging teamwork
- monitoring and controlling shift work or overtime working
- reducing or monitoring payment systems which work on piece rate
- providing appropriate training

A fuller explanation of MSDs is provided in Appendix 4 – Musculoskeletal Disorders – Anatomy of an Injury (source acknowledged).

8. Information, Instruction and Training

Many of the Council's employees work with equipment that should be adjusted to suit their own stature. Thus in order to minimise the risks of developing musculoskeletal pains employees need to be provided with sufficient information, instruction and training in the use of equipment provided

This will include instructions and training on setting up computer workstations, the adjustments possible when using ride on equipment (including pool cars) and other work equipment.

All employees should be made aware of the ergonomic risks associated with their particular role and information sheets such as IS90 – Introducing Ergonomics (see appendix 6) should be made provided.

AS10 – Display Screen Equipment
IS23 – Ergonomic Driving
IS90 – Introducing Ergonomics
Login to Learn – DSE Awareness Training

Training is available in relation to risk assessment as well as a variety of other training ergonomic linked topics.

If additional support is required this can be gained from either your Service Health & Safety contact or the Health & Safety team.

Appendix 1

ERGONOMICS ASSESSMENT

Employee's Name _____ Date _____

Conducted by _____ Review Date _____

1. Working Position	Yes	No
Does work posture require frequent bending of the neck, shoulder, elbow, wrist or finger joints?		
Are there any concerns with regards to seating suitability (where provided)?		
Does work area restrict free movement of operative?		
Does operative suffer from any discomfort in normal working position?		
Does work require long periods of standing/seating?		
Does work require walking and carrying loads?		

2. Work Task	Yes	No
Is the operative unable to pace the task?		
Is the operative unable to take breaks regularly?		
Are there any concerns with regards to mechanical aids being provided or correct for the task?		
Does the task involve heavy or repeated lifting?		
Are there any concerns with regards to work equipment being provided or being incorrect for the task?		
Are there any concerns with regards to correct information and training being provided for the task?		
Is there upper extremity or whole body vibration?		
Does the task require frequent repetitive motions?		
Is there incorrect Personal Protective Equipment in use?		

3. Environment	Yes	No
Is environment unsuitable for task being done?		
Is temperature inadequate for task being carried out?		
Is lighting unsuitable for task being carried out?		
Are underfoot conditions unsuitable for task?		
Are noise levels considered to be at an unacceptable standard?		
Is air circulation considered unacceptable for environment?		

4. Personal Capability	Yes	No
Does operative have any difficulties with vision which could affect or be affected by task?		
Does operative have any difficulties with hearing which could affect or be affected by task?		
Does operative suffer from fatigue when carrying out task?		
Does operative know how to report any ergonomic issues?		

Refer to MSD symptoms checklist if any of the above questions are answered Yes.

Carry out further investigation of any issues highlighted and consider the list of suggested control measures as a possible remedy.

POSSIBLE CONTROL MEASURES

1. Working Position

Concerns	Possible Controls
Avoid static loads, fixed work postures, and job requirements in which operatives must frequently or for long periods: • lean to the front or the side, • hold a limb in a bent or extended position, • tilt the head forward more than 15 degrees, or • support the body's weight with one leg,	Provide adjustable, properly designed chairs with the following features: • adjustable seat height, • adjustable up and down back rest, including a lumbar (lower back) support, • padding that will not compress more than an inch under the weight of a seated individual, • chair that is stable to the floor at all times (5 leg base), • ensure work area allows free movement of operative, • allow the operatives, at their discretion, to alternate between sitting and standing, • provide floor mats or padded surfaces for prolonged standing, • consider redesigning task to eliminate need to walk with load, • provide equipment for carrying loads, minimise distance materials are moved over.

2. Work Task

Concerns	Possible Controls
• Prolonged working • Rates of work causing fatigue • Moving of loads and materials outwith capabilities • Inappropriate Equipment	• allow operative to pace the task, • provide sufficient breaks from task for operative, • provide mechanical aids where required, • avoid need for manual handling wherever possible, • consider safe systems of work incorporating team lifts where required, • provide appropriate equipment for task, taking into account operative's capabilities, • consider rotating staff round tasks to prevent repetitive, mundane work, • provide support devices where awkward body postures (elevated hands or elbows and extended arms) must be maintained, • use fixtures to relieve stressful hand/arm positions, • select power tools and equipment with features designed to control or limit vibration transmissions to the hands, or alternatively design work methods to reduce time or need to hold vibrating tools, • provide operative with correct training and information for task to be done safely, ensure operative is issued with appropriate Personal Protective Equipment.

3. Environment

Concerns	Possible Controls
• Workplace is too hot or cold • Lighting is too bright or dull • Uneven flooring or stairways • Distractions from noise or vibration	• provide adequate working temperature taking into account work being done i.e. manual/non-manual, • provide lighting to required standard for task, ensure no glare, • provide underfoot conditions suitable for task e.g. anti-slip, even, padded surfaces, • assess noise levels in work area and monitor any changes to noise in the working environment, provide adequate ventilation in working environment.

4. Personal Capability

Concerns	Possible Controls
• Work expectations beyond physical capabilities of individual • Illness or injury	• job match operative to task taking into account physical ability, age, experience etc., • provide Health Surveillance (where required), • ensure sufficient breaks are available for operatives in line with task, provide operatives with facility to raise health concerns with Line Manager.

ERGONOMICS – MSD SYMPTOMS CHECKLIST

Name: _____

Job Title: _____

Date: _____

1. Have you had pain or discomfort during the last year?

   Yes o No o

   Indicate the area(s) on the attached drawing which give you pain/discomfort.

2. Tick the area/description which best describes your problem

	Neck	Shoulder	Elbow/ Forearm	Hand/ Wrist	Fingers	Upper Back	Lower Back	Thigh/ Knee	Lower Leg	Ankle/ Foot
Aching										
Numbness (asleep)										
Tingling										
Burning										
Pain										
Weakness										
Cramping										
Swelling										
Loss of colour										
Stiffness										
Other										

3. When did you first notice the problem? _____ Month _____ Year

4. How long does each episode last? 1 hour/1day/1 week/1 month/ 6 months*
   Delete as appropriate*

5. Have you had medical treatment for this problem? Yes o No o

6. If not, why not?

_____

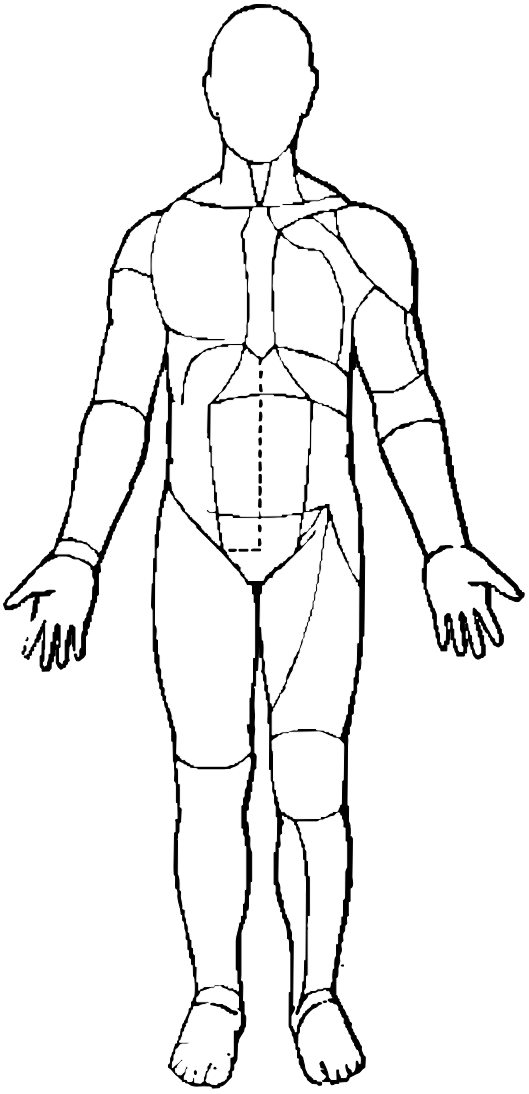
_____

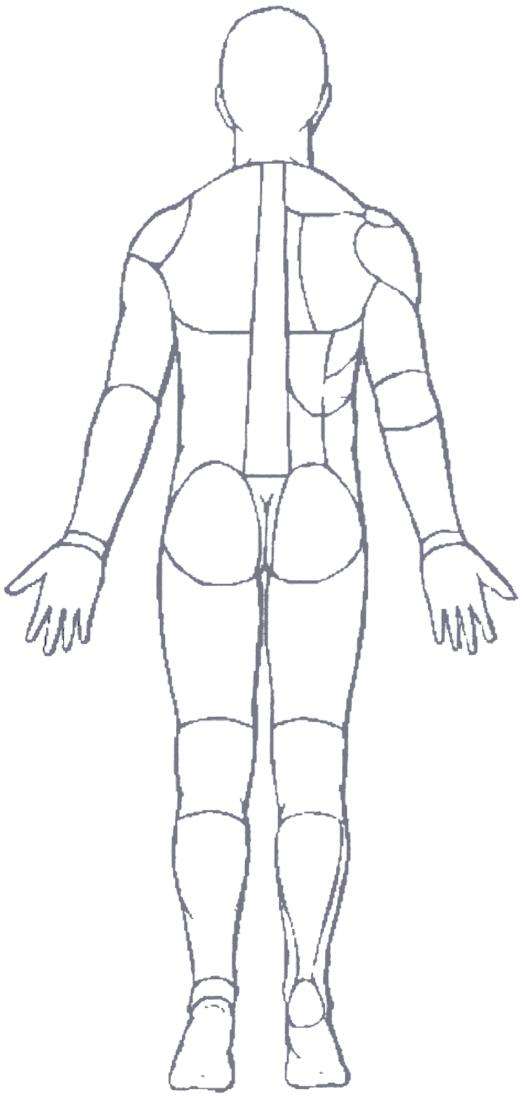
7. How much time have you lost in the last year because of this problem? _____ Days

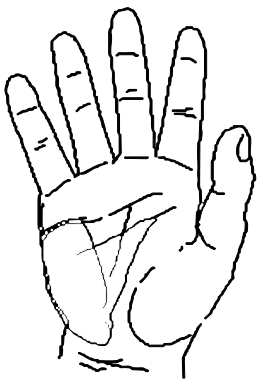
8. Please comment on what you think would improve your symptoms

_____

_____







MUSCULOSKELETAL DISORDERS – ANATOMY OF AN INJURY

The average person working at a keyboard can perform 50,000 to 200,000 keystrokes a day. Small repetitive movements can disturb the delicate balance of muscles, tendons, and ligaments in the hand and cause cumulative trauma disorders (CTDs), also know as repetitive strain injuries (RSI's) or musculoskeletal disorder (MSD's). The use of proper keyboard and pointing device techniques, rest breaks, and a properly set up workstation, can significantly reduce the risk of developing an overuse injury.

The nerves that supply the muscles and the skin in the upper extremity leave the spinal cord in a complicated network of nerve fibres, roots and bundles – this is called the brachial plexus. These nerves course down the side of the front of the neck and divide, then rejoin to form the median, radial and ulnar nerves. These nerves travel down the arm in different distributions and innervate the muscles and provide sensation. The nerve sends the signal to the muscle telling it to contract, and allows you to feel sensation where it supplies the skin. If these nerves are compromised in any way, loss of strength and sensory changes can result.

Nerves can be compromised through repetitive movements. Repeated motions can result in compression or "entrapment" of nerves. Compression can be caused by tight muscles, inflammation of surrounding tissues, or misalignment of the nerve.

When a nerve is compressed, you feel the sensations somewhere between the point of compression and your fingertips. Ulnar, radial or median nerve compression can occur anywhere along the path they travel through, from the neck to the hand. Shoulder pain can be referred from a nerve pinched in the neck. Pain in the forearm, wrist, or fingers can originate from compression at the neck, elbow or wrist level. That is why when you have pain in your elbow, wrist or hand, you should start looking for the cause at the neck and move down the arm.

Nerves can also be compressed in more than one place. This is very common with computer users who have muscle tightness or tension in several places. This phenomenon is called a double crush injury and can be very difficult to diagnose.

Some common nerve injuries/syndromes that can result from repetitive movements include thoracic outlet, radial tunnel, cubital tunnel and carpal tunnel syndromes.

Thoracic outlet syndrome occurs when the brachial plexus is compressed by tightness of the scalenes (a group of anterior neck muscles that attach to the first rib), or by the first rib being elevated. Signs and symptoms include numbness and tingling in the hand, often made worse with overhead activities such as drying your hair with a dryer, or cradling the phone between the ear and shoulder. Compression of the brachial plexus often stems from muscle tightness at the side of the neck that can result from poor head position or slumped posture. Sleeping with your hands up over your head or around your pillow can make pain worse at night.

Radial tunnel syndrome refers to compression or entrapment of the radial nerve at the outside of the elbow. It is frequently caused by repetitive wrist and finger extension or turning of the forearm. Symptoms can occur at the elbow where the nerve is compressed or near the base of the thumb, or anywhere in between. Wrist weakness is a common symptom.

Cubital tunnel syndrome occurs when the ulnar nerve is compressed or entrapped at the inside of the elbow. Common symptoms include numbness or tingling up and down the inside of your arm, with tingling into the ring and little fingers. Repetitive bending of the elbow, or resting your elbow on a hard surface, are common causes of this nerve injury. The ulnar nerve can also be compressed at the Guyon's canal in the wrist, but this is less common.

Carpal tunnel syndrome is caused by compression of the median nerve at the level of the carpal tunnel. This tunnel is formed at the wrist by the transverse ligament over the carpal bones in the hand. Early signs or symptoms may include numbness or tingling in the thumb, index or middle finger and one half of the ring finger. Persons are often awakened at night by the hand "falling asleep". Symptoms are often increased when driving or attempting to hold objects. Frequent dropping of objects is a common complaint.

Tendons also can be affected by repetitive motions. They attach muscle to bone, and are connective tissues that contain little stretch or rebound. If they are stressed beyond their strength by overuse, or maintaining a static or prolonged position, they can get tiny tears in them. Friction from overuse can also cause inflammation. This causes a condition known as tendinitis.

Tendinitis occurs most often in the flexor and extensor tendons of the fingers, thumb, forearm, elbow or shoulder. Symptoms range from specific aches, stiffness, tightness and burning sensations, to a deep non-specific pain. Grasp can be impaired to the point where you have difficulty holding on to objects.

The tendons of the wrist and hand are very small and are at high risk for injury when overused. This can occur with activities such as keying in awkward positions, pressing the keyboard too hard, or holding a mouse or pointing device too tightly, or for too long. Although naturally stronger and more durable, the larger tendons in the shoulders can be affected if the arms are held out in front, or off to the side too long, or excessive reaching is done while working. Tennis elbow, or *lateral epicondilitis*, affects the tendons of the finger extensor muscles at the outside of the elbow. Golfer's elbow, or *medical epicondilitis*, affects the tendons of the finger flexor muscles at the inside of the elbow.

Muscles can be strained by overuse resulting in tiny tears in the muscles. These tiny tears form scar tissue and contribute to inflammation and muscle stiffness. A diffuse, achy pain can result in what's called myofascial pain. Painful nodules, or tender spots called trigger points, can also occur in overused muscles.

Trigger points can occur in almost any muscle. When you press a sore spot, the pain can travel out to a distant area and then recede. This is called a referral pattern. The site of the trigger point is usually distant from the site of the referred pain. Muscles in the neck refer pain to the head, shoulders, upper back and hand. Muscles in the arms can refer pain to the neck, shoulders, elbows, wrists and hands.

Sleep patterns are often disrupted by muscle pain. You wake up feeling stiff and tired even when you think you have had enough sleep. This disruption of sleep, and increased discomfort, can increase fatigue levels that result from working with overused muscles.

Joints can get stiff and dysfunctional if they are being held in one position for multiple hours day in and day out. The cervical and lumbar spine joints are particularly susceptible to strain when the spine is held in prolonged, awkward postures. Looking down while typing, looking over towards a copy holder off to the side, or sitting slumped in a chair, can strain the ligaments in the spine that supports the joints and create stiffness and inflammation in a joint.

Avoiding Repetitive Trauma Disorders

There are several forces that work together to result in a repetitive trauma disorder. Your work environment, your job duties, your equipment, and how you use your body, are all important components. Increased awareness of your posture and work habits are necessary to enable you to work safely and avoid the problems associated with repetitive trauma disorders.

Source: Eighty20 Consulting

Ergonomics While Driving

The use of ergonomics in relation to driving is aimed at maximising the natural ability of your body to move and respond to the physical stress associated with the driving activity. This minimises exposures to risk factors that may result in injury or illness.

Studies have suggested ten ways to reduce the risk of injury or illness from ergonomic factors prior to undertaking any driving journey:

1. Pockets - Remove items from pockets, such as a wallet or keys, as they may press on soft tissue as the driver sits down. This compression can reduce circulation or press on nerves and other soft tissues;

2. Stretching - Items that are likely to be required during the drive, e.g. paper handkerchiefs etc, should be positioned somewhere that means stretching is not required during the driving activity. If reaching for an item is likely to be required then time should be taken to stop the vehicle in a safe place instead of risking an accident and/or injury due to awkward reaching;

3. Seat Belt - If the seat belt strap is uncomfortable, take time to adjust it to ensure it fits properly. Approved straps that can adjust the position of seatbelt straps can be used in some circumstances, e.g. pregnancy, young persons etc;

4. Mirrors - Adjust the vehicle's mirrors so that there is no need to make extensive movements to see. Blind spot mirrors can also be fitted to a car, but it should be noted that this does not remove the need to check the blind spot before undertaking certain driving manoeuvres;

5. Back tilt – It is recognised that the least amount of pressure is exerted on the back when the seat back is at 30 degrees past the vertical, i.e. slightly reclined. The seat back should fully support the driver's back. If the seat back cannot recline then it is advisable to move from side to side using small body movements in order to encourage blood flow, better still take regular breaks from the driving activity, more advice is available on this matter within the occupational road risk policy (arrangement section 32);

6. Lumbar support – the lower part of the back should feel supported. If it is not supported by the car seat then supplementary support can be added to the seat, for example a lumbar roll that can be purchased from a number of office supply companies;

7. Seat pan tilt – the seat of the car should allow the driver's knees to be slightly lower than their hips. This opens up the hip flexors and increases circulation to the back and decreases pressure on the lower back;

8. Seat base – when sitting in a car it is advisable to move as far back into the seat as possible. Drivers should still be able to place their hands comfortably between the back of the knee and the front of the seat. If this cannot be achieved then it may be possible to add a pillow or back cushion to the car seat to move the driving position forward;

9. Steps – Drivers of larger vehicles with a high step up should consider adding an extra step or slowly step in and out of the vehicle instead of jumping down. Over time, jumping down

can cause compression to the spine. Straps and other hand holds should be checked frequently for wear and tear;

10. Steering wheel grip – It is advisable to keep two hands on the steering wheel at all times except when changing gears or operating essential car controls. Changing the hand posture frequently will improve circulation and reduce fatigue. There are common postures that should be avoided:

- The "death grip" – this grip results in decreased circulation and muscle tension. The grip should be light. If the knuckles are white, the grip is too hard;

- The "one arm" grip – The wrist is noted to rest at 12 o'clock on the steering wheel and the fingers grip over the top of the wheel. This will cause compression of soft tissue of the wrist and reduce circulation at the neck and shoulder too;

- Arms straight out in front to reach the steering wheel – Drivers should aim to drive with their shoulders relaxed and arms close to the sides of the body. Avoid reaching too far forward to grasp the steering wheel. Tilting the steering wheel upwards and using a light grasp lower on the steering wheel may be an option for some drivers;

- The "window prop" – this posture decreases circulation at the neck and shoulder and may compress soft tissue on the arm/wrist.

Based on information published on www.lanl.gov

Appendix 6

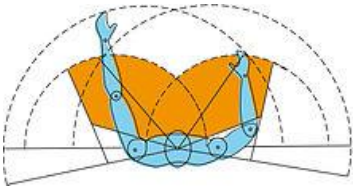
Employee Information Sheet - Introducing Ergonomics

You will have heard the word but have you thought about what it means?

Ergonomics has been defined as: "An applied science that coordinates the design of devices, systems, and physical working conditions with the capacities and requirements of the worker."

In short ergonomics involves arranging the environment to fit the person and whilst it is most often associated with the workplace, ergonomics is applicable to many aspects of life, e.g. ergonomically designed vehicles. Every day, both at work and at home, your body is subject to tasks that if performed in excess could cause it harm. Risk factors or work conditions that may affect you include:

- Use of inappropriate tools;
- Poor body mechanics;
- Repetitive tasks;
- Forceful exertions;
- Restrictive work stations;
- Awkward postures;
- Lifting heavy or awkward objects.



If you know about these ergonomic hazards then you are better able to avoid those hazards that may cause injury, leading to a safer workplace. With that in mind think about:

1. Understanding the common injuries, to include discomfort with specific movements, irregular stiffness or pain, often appearing gradually, and may disappear during rest;
2. The importance of reporting signs and symptoms as soon as possible to a supervisor;
3. How to report potential risk factors in your work area.

Over time, poor posture may be caused by habits from everyday activities such as sitting in office chairs, cradling a phone on your neck, carrying a bag over same shoulder, driving, prolonged standing, caring for small children, or even sleeping. This may cause and/or aggravating episodes of back and neck pain and damage to the spinal structure.

Fortunately, the main factors affecting posture and ergonomics can be controlled and the following factors should be considered by both risk assessors and those performing work activities.

1. **Identify the warning signs of back pain caused by poor ergonomics and posture.**

   Back pain may be the result of poor ergonomics and posture if the back pain is worse at certain times of day or week (such as after a long day of sitting in an office chair in front of a computer, but not during the weekends); pain that starts in the neck and moves downwards into the upper back, lower back, and extremities; pain that goes away after switching positions; sudden back pain experienced with a new job, a new office chair, or a new car; and/or back pain that comes and goes for months.

2. **Keep the body in alignment while sitting or standing.**

When standing, distribute body weight evenly to the front, back, and sides of the feet. While sitting in an office chair, take advantage of the chair's features. Sit up straight and align the ears, shoulders, and hips in one vertical line. Any prolonged sitting position, even a good one, can be tiring. Shifting forward to the edge of the seat with a straight back can alternate with sitting back against the support of the office chair to ease the work of back muscles.

Some people benefit from a naturally balanced posture that is achieved by sitting on a balance ball; in this posture the pelvis is rocked gently forward increasing the lumbar curve which naturally shifts the shoulders back (similar to sitting on the edge of a chair seat).

Also be aware of and avoid unbalanced postures such as crossing legs unevenly while sitting, leaning to one side, hunching the shoulders forward, or tilting the head.

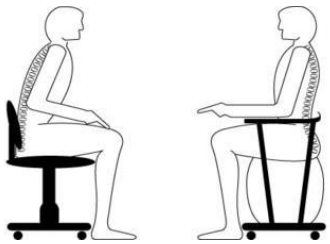
3. **Get up and move.**

   As muscles tire, slouching, slumping, and other poor postures become more likely; this in turn puts extra pressure on the neck and back. In order to maintain a relaxed yet supported posture, change positions frequently. One way is to take a break from sitting in an office chair every half hour for two minutes in order to stretch, stand, or walk.

4. **Use posture-friendly props and ergonomic office chairs when sitting.**

   Supportive ergonomic "props" can help to take the strain and load off of the spine. Ergonomic office chairs or chairs with an adjustable back support can be used at work.

   - Footrests, portable lumbar back supports, or even a towel or small pillow can be used while sitting in an office chair, on soft furniture and while driving.
   - Using purses, bags, and backpacks that are designed to minimize back strain can also influence good posture.



   - Proper corrective eyewear, positioning computer screens to your natural, resting eye position can also help to avoid leaning or straining the neck with the head tilted forward.

5. **Increase awareness of posture and ergonomics in everyday settings**

   Becoming aware of posture and ergonomics at work, at home, and at play is a vital step towards instilling good posture and ergonomic techniques. This includes making conscious connections between episodes of back pain and specific situations where poor posture or ergonomics may be the root cause of the pain. If such connections are made with work activities speak to your line manager about it.

6. **Use exercise to help prevent injury and promote good posture**

   Regular exercise such as walking, swimming, or cycling will help the body stay aerobically conditioned, while specific strengthening exercises will help the muscles surrounding the back to stay strong. These benefits of exercise promote good posture, which will, in turn, further help to condition muscles and prevent injury.

7. **Wear supportive footwear when standing**

Avoid regularly wearing high-heeled shoes, which can affect the body's centre of gravity and induce compensatory alignment of the entire body, thus negatively affecting back support and posture.

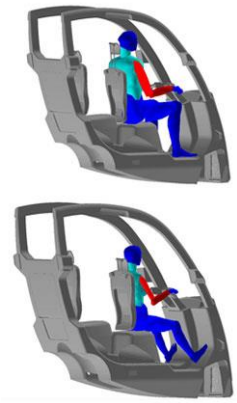
When standing for long periods of time, propping a leg up on a foot rest, wearing supportive shoe orthotics, or placing a rubber mat on the floor can improve comfort.

8. **Remember good posture and ergonomics when in motion**

   Simply walking, lifting heavy materials, holding a telephone, and typing are all moving activities that require attention to ergonomics and posture. It is important to maintain good posture even while moving to avoid injury, walking tall with shoulders back for example.

   Back injuries are especially common while twisting and/or lifting and often occur because of awkward movement.

9. **Create ergonomically supportive environments and workspaces.**



   It does require a small investment of time to personalize the workspace, home, and car, but the payoff will be well worth it. Undue strain will be placed on the structures of the spine unless the office chair, desk, keyboard, and computer screen, etc. are correctly positioned.

   It's much easier and less time consuming to correct everyday ergonomics and minimize back or neck pain than to add doctor visits and corrective therapies for debilitating pain conditions.

10. **Avoid overprotecting posture**

    Remember that it is important to maintain an overall relaxed posture. Avoid restricting movements by clenching muscles or adopting an unnatural, stiff posture. For individuals who already have some back or neck pain, it's a natural tendency to limit movements to avoid provoking increased pain.

    However, unless there is a fracture or other serious problem, the structures in the spine are designed for movement and any limitation in motion over a long period of time creates more pain and a downward cycle of less motion and more pain.

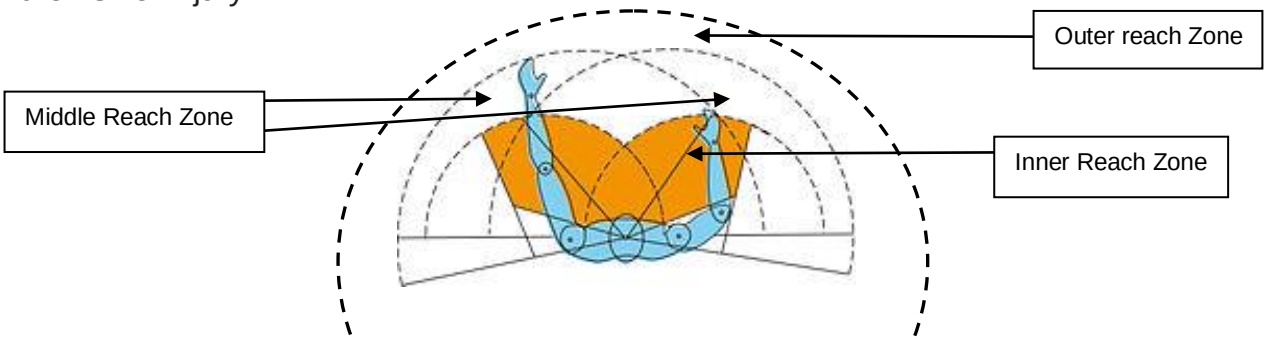
Arranging Your Work Environment – Reach Zones

Reach zones help establish where equipment should be located within your work area e.g. at your desk or workstation. Workstations can be divided into zones or areas depending on the reaching ability of the individual sitting at their desk.

Ideally tasks of high frequency should be located in the inner reach zone, i.e. directly in front of the individual where the upper arm is resting close to vertical and the elbows close to 90 degrees of bend. Typically these high frequency tasks involve the hands only *i.e.* typing, money counting, mouse use or writing.

Items with less frequent use, but perhaps still regular use i.e. "medium use items" such as phones and documents can be located in the middle reach zones of the work area and finally items rarely used such as stationary and files can be located in the outer reach zone.

This approach minimises stretching and excessive loading of the muscles and this reduces the risk of injury.



The **reach zone** covers the area that extends beyond optimum reach where, using the shoulder and arm, the user can reach with comfort. You may need to rise from the chair when accessing the outer reach zone

Ideally workstation layouts should be arranged to bring frequently used objects closer to the user.

Schedule 1

Impact Assessments

Document Title: Health and Safety Policy - Arrangement Section 31, Ergonomics at Work

Date: 01 March 2017 **Review Date:** As circumstances dictate

Environmental Impact Assessment: This document has been assessed for significant environmental impact; no detrimental impact has been identified

Equality Impact Assessment: This document has been assessed for significant equality implications; no significant issues have been identified.

General Comments: This document is the arrangement section, relating to the provision of ergonomically appropriate workplaces across the council. This is associated with the Council's health and safety policy as required by the Health and Safety at Work Act 1974. The general aim of the council is to ensure a healthy and safe working environment for all persons working for or make use of Council Services. Nothing in the document serves to have any negative impact on the above issues and indeed, in general, associated documents will encourage positive consideration of the factors to ensure all members of the workforce and community are afforded access to the same safe and healthy workplace.