Checklist for the prevention of WRULDs

Part A: Introduction

Work-related neck and upper limb disorders (WRULDs) are impairments of bodily structures such as to a tendon, nerve, muscle, joint, bursa or the localised blood circulation system. Principally, they are caused by the performance of work and by the effects of the immediate environment where that work is carried out. Symptoms include pain and/or reduced ability to function normally. As the term WRULDs suggests, any region of the neck, shoulders, upper arms, elbows, forearms, wrists and hand can be affected. More information is available in the European Agency for Safety and Health at Work's factsheet (http://osha.europa.eu/en/publications/factsheets/72/view) and E-Fact (http://osha.europa.eu/en/publications/e-facts/efact16/view) on WRULDs.

This checklist aims to provide employers, workers, their supervisors and OSH professionals with basic information about WRULDs and how they may be prevented. It helps to identify the particular factors that can contribute to workers developing these disorders. Furthermore, it gives examples about the practical steps that can be taken to prevent or reduce the risks of workers sustaining WRULDs. This approach is based upon the application of ergonomics — the study of the relationship between workers and their environment — which aims to design better working systems by matching work demands to the capacities, capabilities and characteristics of the full range of individuals in the workforce. It provides a systematic approach to identifying problems and introducing solutions.

The risk factors that may cause or contribute to WRULDs can be grouped into three categories:

- physical risk factors such as work involving awkward postures or repetitive movements;
- psychosocial risk factors, which are associated with levels of workplace stress;
- individual risk factors, which vary according to an individual's own characteristics.

There are two important factors to look out for at work:

- the size of the load: the amount of physical effort applied, including the weights that are handled or the forces to be resisted; and
- time: the length and frequency of the physical activity leading to tiredness and the resulting need for recovery.

How to use a checklist

- A checklist can help identify hazards and potential prevention measures and, used in the right way, forms part of a risk assessment.
- This checklist is **not intended to cover all the risks** of every workplace but to help you put the method into practice.
- A checklist is only a **first step in carrying out a risk assessment**. Further information may be needed to assess more complex risks and in some circumstances you may need an expert's help.
- For a checklist to be effective, you should **adapt it to your particular sector or workplace**. Some extra items may need to be covered, or some points omitted as irrelevant.
- For practical and analytical reasons, a checklist presents problems/hazards separately, but in workplaces they may be intertwined. Therefore, you have to take into account the interactions between the different problems or risk factors identified. At the same time, a preventive measure put in place to tackle a specific risk can also help to prevent another one; for example, air conditioning put in place to combat high temperatures can also prevent stress, given that high temperatures are a potential stress factor.
- It is equally important to check that any measure aimed at reducing exposure to one risk factor does not increase the risk of exposure to other factors; for example, reducing the amount of time a worker spends reaching above shoulder level may also increase the time spent working in a stooped posture, which may lead to back disorders.
- Although the checklist may state some numerical limits, such as working in a particular manner for two hours during a shift, these values should not be seen as exact safety limits but as an indication of an increase in the size of the exposure to risk, and to identify priorities for action.

Important issues that need to be addressed

- Are managers and workers aware of the potential causes of WRULDs and committed to their prevention?
- Has a practical, **participative approach** (worker involvement) to problem-solving been adopted within the organisation?
- Have risk assessments been undertaken by appropriately trained staff?
- Are any reported cases of WRULDs being managed?
- How is the effectiveness of the measures taken to prevent WRULDs being evaluated and monitored?

Part B: Checklist for the prevention of WRULDs

Does the hazard exist at the workplace?
Are the hazards controlled to minimise the exposure of workers to the risk of developing a WRULD?

Answering `**NO**' to the following questions indicates a **need** for **improvements** to be made in the workplace.

Questions	YES	NO
Workstation		
Is the workstation suitable for the task and can it be adjusted to suit a worker's specific needs?		
Do workers have enough space to change their position when necessary during work?		
……		
Temperature		
Is the temperature comfortable for the type of work being performed?		
If the temperature is cold, have workers been provided with suitable clothing and personal protection to ensure they can work in comfort?		
…….		
Hand tools		
Are hand tools suitable for all workers to carry out tasks effectively?		
…….		
Vibration		
Is the transmission of vibration or repeated jerky impulses to the hands prevented?		
…….		
Gloves		
Are the gloves provided suitable for the tasks performed?		
Do gloves allow unrestricted hand movement without reducing grip strength?		
…….		
Repetitive movements		
Does a task involve repeating the same movements twice or more per minute?		
Can the work be performed without repetitive movements of the hands or arms for more than two hours during the shift?		
……		
Use of muscular force		
Can the work be performed without the continuous or repetitive		

use of high muscle force for more than two hours during the shift?		
……		
Posture		
Can the task be performed without over-reaching or stretching?		
Can the worker observe the task without holding their head/neck bent or twisted?		
Can the work be performed without holding the arms elevated above shoulder level for more than two hours during the shift?		
Can the work be performed without bent or deviated wrist postures for more than two hours during the shift?		
Can the work be performed without having to hold onto objects firmly, either with a very narrow grip or with fingers spread widely apart for more than one hour during the shift?		
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Mechanical pressure		
Can the work be performed without exposing the hand, wrists or other body parts to sharp objects or edges that cause pain or injury?		
Can the work be performed without using any part of the hand or wrist as a hammer?		
……		
Organisation of work		
Can workers stop work for a short period of rest if it is needed?		
Do workers feel that they have the support of their co-workers and supervisors to achieve their objectives?		
……		
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Actions to be taken to control WRULD risks

Part C: Examples of preventive measures

Workstation
Ensuring that working heights are appropriate for the full range of workers. Relocating equipment to provide more space. Relocating items that workers have to see clearly within their comfortable range of vision. Providing adjustable workstations that allow postures to be varied between standing and sitting.
Temperature
Avoiding handling or insulating cold items or equipment. Directing warm/cool air flow (as appropriate) to the worker to increase thermal comfort.

Hand tools
Providing tools with ergonomically designed handles. Using lighter tools, or providing supports or counterbalances. Ensuring tools are regularly maintained.
Vibration
Using vibration-damped equipment. Ensuring tools are regularly maintained. Limiting exposure to agreed safe limits.
Gloves
Providing gloves in a wide range of sizes to fit workers' hands. Providing gloves made from flexible materials.
Repetitive movements
Mechanising or automating repetitive processes. Rotation of workers between tasks with high and low exposures. Allowing adequate rest pauses.
Use of muscular force
Reducing the weight of items. Using jigs or counterbalances to hold items. Using stronger muscle groups to perform the task. Using foot pedals as opposed to hand controls. Using more effective tools that need less muscular power; for example, tools with engines or other mechanical advantage.
Postures
Relocating equipment or items that must be held to within easy reach. Ensuring working heights are at or around waist level. Ensuring workplaces and equipment are suitable for the full range of workers' sizes and strengths. Providing jigs for re-positioning work pieces. Ensuring that items that must be viewed clearly are within the normal visual range.
Mechanical pressure
Providing suitable hand tools as effective substitutes for the use of inappropriate parts of the body. Ensuring that edges on work pieces and equipment items are rounded to distribute pressure during contact with parts of the body.
Organisation of work
Improving work flow to avoid production peaks and troughs through better planning and scheduling. Encouraging better communication and team work Providing appropriate training.

References and further information

European Agency for Safety and Health at Work. *Work-related neck and upper limb musculoskeletal disorders*. Luxembourg, Office for Official Publications of the European Communities, 1999.
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