

Safety and health at work is everyone's concern. It's good for you. It's good for business.


Healthy Workplaces **LIGHTEN THE LOAD**



Healthy Workplaces Good Practice Awards 2020-2022

Awarded and commended examples





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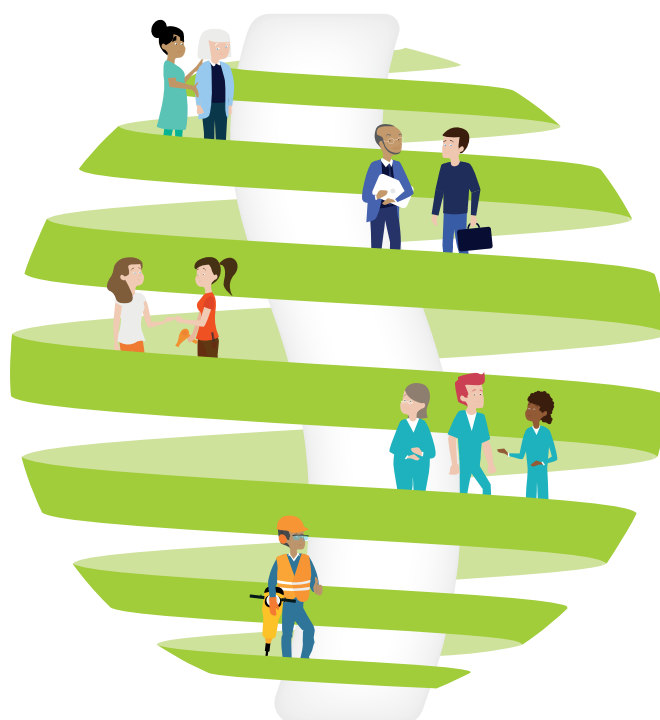
For one-click access to websites and references please consult the online version of this guide at <https://osha.europa.eu/en/publications>

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Foreword by the Jury Chair

The Healthy Workplaces Good Practice Awards recognise innovative and sustainable approaches to managing occupational safety and health (OSH). The awards are organised by the European Agency for Safety and Health at Work (EU-OSHA) as part of its pan-European Healthy Workplaces Campaigns.

The focus of the 2020-22 campaign — **Healthy Workplaces Lighten the Load** — is on preventing and reducing the risk of musculoskeletal disorders (MSDs) in the workplace. It promotes the importance of raising awareness of MSD prevention among employers and workers who can collaborate to find practical solutions in addressing risks, thus creating a culture of prevention in Europe's workplaces.

The Good Practice Awards play a major role in demonstrating the benefits of good safety and health practice, while providing a platform for sharing knowledge and experience. The 2020-22 awards focus on small and large companies and organisations that demonstrate an outstanding commitment to actively identifying risks and implementing innovative and effective solutions that reduce or eliminate the threat of work-related MSDs.

The pan-European tripartite jury that I chaired reviewed 38 applications from 22 countries (EU, European Free Trade Association-European Economic Area, Western Balkans and Turkey) for the 2020-22 awards. These applications were submitted by companies and organisations from a wide range of sectors. The jury comprised of representatives from various organisations and bodies — the European Commission's Directorate-General for Employment, Social Affairs and Inclusion, Business Europe and the European Trade Union Institute (the European social partners), and myself, an independent academic in ergonomics. Of the 38 applicants, we awarded 8 organisations and commended another 8.

This booklet showcases the awarded and commended examples of good practice, providing a brief description of each intervention or initiative implemented. The issues faced by each company or organisation, the actions taken to address them and the results achieved are described. The examples presented could inform any company or organisation's OSH strategy, regardless of size, sector or Member State, by tailoring aspects of the interventions described to individual characteristics and needs.

Jury Chair Ivars Vanadzins is an independent academic in occupational health and safety with a strong background and interest in ergonomics. He works at the Institute of Occupational Safety and Health in Latvia.



Introduction

Why should preventing and managing work-related MSDs be a top priority?

MSDs are the most prevalent work-related health issue in Europe. They affect workers of all ages in all sectors and occupations:

- Three out of five workers in the EU claim to suffer from MSD-related pain, mainly in the lower back, shoulders, neck and upper limbs, and to a lesser degree the lower limbs.¹
- About 60% of workers report suffering from one or more MSDs.²
- The prevalence of work-related MSDs is higher among ageing workers, and as official retirement ages rise more workers are likely to develop chronic conditions.²
- Work-related MSDs are prevalent in all sectors.
- Repetitive hand or arm movements have been identified as one of the most prevalent MSD-related risk factors in EU establishments, followed by prolonged sitting and lifting, or moving people or heavy loads.³

Although work-related MSDs are most often associated with repetitive movements, awkward postures and manual lifting, there is evidence that sedentary work in prolonged sitting or standing positions is also an important risk to MSD health. This is a particular concern for office and factory workers, drivers, cashiers and retail workers,⁴ as well as workers who do home-based teleworking that has become a trend in light of the recent COVID-19 pandemic.⁵

The presence of MSDs not only affects workers' performance at work, it also has a direct impact on their quality of life. Overall fatigue, headaches, eyestrain, sleeping difficulties and anxiety are conditions commonly associated with MSDs.⁴

From an economic perspective, worker absenteeism and early retirement due to MSD-related issues are costly for employers and government support services. Therefore, it is vital that employers assess risks and take appropriate measures to protect worker safety and health. This not only benefits workers' wellbeing; it also increases productivity, thus enabling businesses to be more competitive.

Legislation regarding work-related MSD risks falls within the scope of the OSH Framework Directive⁶ that aims to protect workers from work-related risks in general and establishes the employer's responsibility for ensuring workplace safety and health. Other directives concerning manual handling,⁷ display screen equipment,⁸ vibration⁹ and the use of work equipment¹⁰ address some more specific MSD-related risks.

Despite legislation and a wealth of available guidance and support information, workers across Europe are still exposed to MSD risks. The examples described in this booklet demonstrate what can be achieved when a company or organisation takes a proactive approach to eliminating or reducing MSD risks by implementing appropriate measures and instilling a culture of prevention.

Recognising good practice — what the jury was looking for

Applicants had to demonstrate innovative and sustainable approaches to managing work-related MSD risks. The jury looked for clear examples that illustrated a holistic approach to OSH management as a result of effective employer-worker participation and commitment. Further criteria included how OSH practices were implemented and what was achieved overall.

The jury addressed the following questions when selecting the awarded and commended examples:

- Are the measures directly relevant to reducing/preventing MSD risks in the workplace?
- Does the example promote a strong culture of risk prevention within the organisation?
- Is there clear evidence of worker participation and the involvement of workers and their representatives, and of the commitment of management?
- Do the implemented measures result in real and demonstrable improvements in terms of MSD risk prevention and OSH in general?
- Is the intervention sustainable over time?
- Could the intervention be transferred to other organisations, businesses, sectors or EU Member States?

The jury also placed particular emphasis on ensuring that the intervention meets or exceeds minimum legislative requirements of the Member State where implemented, while taking into account the needs of the majority of European enterprises, that is, small and medium-sized enterprises.

1 See: <https://osha.europa.eu/en/publications/msds-facts-and-figures-overview-prevalence-costs-and-demographics-msds-europe>

2 See: <https://osha.europa.eu/en/publications/working-chronic-msds-good-practice-advice>

3 See: <https://osha.europa.eu/en/publications/third-european-survey-enterprises-new-and-emerging-risks-esener-3>

4 See: <https://healthy-workplaces.eu/en/media-centre/news/sedentary-work-important-risk-our-musculoskeletal-health>

5 See: <https://osha.europa.eu/en/publications/preventing-musculoskeletal-disorders-when-teleworking>

6 See: <https://osha.europa.eu/en/legislation/directives/the-osh-framework-directive/1>

7 See: <https://osha.europa.eu/en/legislation/directives/6>

8 See: <https://osha.europa.eu/en/legislation/directives/5>

9 See: <https://osha.europa.eu/en/legislation/directives/19>

10 See: <https://osha.europa.eu/en/legislation/directives/3>

More information

A wealth of information on OSH is available in more than 20 European languages on the EU-OSHA website (<https://osha.europa.eu/en>).

You can access more information on the Healthy Workplaces Lighten the Load Campaign at healthy-workplaces.eu, where you will also find a database of practical tools and guidance,¹¹ and other useful resources grouped by several priority areas.

Acknowledgements

EU-OSHA greatly appreciates the beneficial support its national focal points throughout Europe provide to the Healthy Workplaces Campaigns and other awareness-raising activities, and particularly for nominating and assessing applicants for the Good Practice Awards.

EU-OSHA wishes to thank the members of the 2020-22 Good Practice Awards jury: Ivars Vanadziņš, Chair of the Jury; Eckhard Metze, Management Board Member, employers' representative; Romolo de Camillis, Management Board Member, governments' representative; Andreas Stoimenidis, Management Board Member, workers' representative; Jesús Álvarez, European Commission, Directorate-General for Employment, Social Affairs and Inclusion.

¹¹ See: <https://healthy-workplaces.eu/en/tools-and-publications/practical-tools>

Preventing musculoskeletal disorders in a large hospital through staff involvement and an age-sensitive approach



University Hospital Vienna (Universitätsklinikum AKH Wien)

Austria

www.akhwien.at

Background

University Hospital Vienna is the largest hospital in Austria. Boasting a workplace full of diversity, the hospital employs around 7,000 workers from a wide range of occupations.

The staff of the Operational Department perform crucial support tasks, such as transporting patients, providing in-patient services and hygienic cleansing of the premises. Despite their essential role in supporting the core functions of the hospital, these employees have often been underrepresented and overlooked.

The Operational Department comprises some 600 employees whose average age is 50 years old. Their work is physically strenuous and involves twisting movements, pushing and carrying heavy loads, as well as walking long

distances. Therefore, the key intervention objectives were to promote equipment that reduces physical strain and for long-time, competent staff to be able to share their valuable experience with new recruits.

Aims

With the help of staff, the intervention creates a work environment designed to be compatible with an ageing workforce, taking into account employees' needs and abilities in different stages of their lives. The aim is to preserve and promote a safe work environment in which ageing staff are able to maintain their ability to work.



Source: AKH Wien

What was done and how?

- A survey was carried out on the 'social capital' among Operational Department staff so as to involve them in the decision-making process.
- Health circles and risk management workshops were created to obtain feedback from staff regarding their working conditions, to identify MSD risk factors and to propose preventive measures. Based on feedback from health circles, courses and seminars were held between June and December 2021. Topics included spinal and relaxation exercises, back strengthening, smoking cessation, healthy eating with practical cooking sessions, stretching and stress management.
- There are plans to involve staff in the selection of new work equipment through practical testing (back-friendly operation, weight, ease of handling).
- Specially trained health advisors within the department are readily available to provide peer-to-peer advice. They also organised sporting events to encourage staff to exercise during their leisure time.
- Specially manufactured patient transfer chairs with smaller wheels for better manoeuvrability and smoother running were procured. In addition, the height of the handles allowed for a more erect, and thus back-friendly, posture.
- Staff were involved in the selection of safety footwear.
- Mixed-generation cleaning teams were established so younger and older and new and experienced staff could work together and assist each other. Experienced staff provided training to new recruits, while younger colleagues assisted them in more strenuous tasks. For the most physically demanding work tasks, additional male staff provided assistance, thereby sharing workloads and ensuring optimal use of individual resources.

What was achieved?

- Employees' self-confidence increased as the intervention emphasised the importance of support staff in hospital operations. The mentoring role of older employees also increased their self-confidence.
- Action was taken to prevent MSDs among workers who perform strenuous tasks.
- Team spirit was created through intergenerational cooperation, giving employees a sense of solidarity and ensuring they perform age-appropriate work. This ensured ageing employees are able to work.

Success factors

- Developing measures through management support and staff involvement.



- Involving staff from diverse interest groups ensured that information was communicated promptly and transparently.
- Easy access to the measures, as well as the establishment of a project group to monitor and evaluate the implementation of measures, also contributed to the project's success.

Transferability



The entire approach could be suitably adapted by hospitals in other Member States. Certain measures are transferable to other fields, such as the active involvement and participation of workers and the establishment of mixed-generation work teams.

Costs and benefits

Project resources included time devoted by workers and managers to organise and participate in working groups and workshops. Costs incurred involved the procurement of equipment such as ambulatory armchairs and safety footwear. Long-term benefits include preserving staff fitness for work and fewer costs arising from staff absences.

Key features of good practice example

- Through a multifactorial approach, the intervention addresses both physical and psychosocial MSD risk factors in an often-underrepresented group of hospital support workers, taking into account its age diversity.
- Age was addressed not only through ergonomic measures and health promotion but also by establishing mixed-generation work teams to balance

the physical workload and have experienced staff mentor new recruits.

- Participation was important as workers were involved in assessing risks and identifying solutions through workshops.
- The intervention combined prevention with health promotion. The intervention provided easy access to trained health advisors and arranged seminars on healthy eating and exercise.
- A wide variety of prevention measures were used, from introducing ergonomically designed patient transfer chairs to providing orthopaedic footwear.

Further information

Further information can be found at
<https://www.akhwien.at>

The intervention addresses both physical and psychosocial MSD risk factors in an often-underrepresented group of hospital support workers, taking into account its age diversity.

Wearable exoskeletons to better manage manual handling at airports



Swissport Cyprus Ltd

Cyprus

www.swissport.com

Background

Swissport Cyprus Ltd operates out of Larnaca and Paphos International Airports. It provides ground handling services to several airlines, including the operations control and coordination centre, customer service, aircraft loading/unloading and cleaning.

The Ramp Handling Department is responsible for manual loading/unloading of luggage, cargo and mail on aircraft. This involves frequent and repetitive lifting. Over time, this leads to back disorders.

Despite repeated training, dissemination of information and the supervision of manual handling, the company recognised that employees in the Ramp Handling Department continued to be at risk from musculoskeletal strain. This could lead to increased absenteeism and decreased productivity.



Source: SWISSPORT CYPRUS LTD

Aims

Introduce the LiftSuit exoskeleton to improve employees' quality of life professionally and personally by reducing the pressure that may be placed on the musculoskeletal system during manual handling.

What was done and how?

- Through the company's wellbeing initiative to promote a healthier lifestyle, the campaign 'Work-Ergonomics-Health' was launched.
- The campaign's main initiative was the testing of the LiftSuit, a wearable exoskeleton designed by the company Auxivo in collaboration with Swissport International. The exoskeleton supports lifting movements during luggage handling to reduce workload, exhaustion and fatigue, ultimately ensuring employees' long-term wellbeing.
- Volunteers from the Ramp Handling Department took part in short-term tests of the LiftSuit. They recorded their observations and continuously consulted with the Health and Safety Manager as well as the Company Occupational Physician.
- Feedback and suggestions from the employees involved in LiftSuit testing led to the creation of a more advanced version that was also tested and then certified. As a result, six LiftSuits were purchased for the long-term testing.
- After the final testing and employee feedback, the company will evaluate the results to proceed with the purchase of this innovative product on a larger scale to achieve a healthier and safer working environment for all employees.

What was achieved?

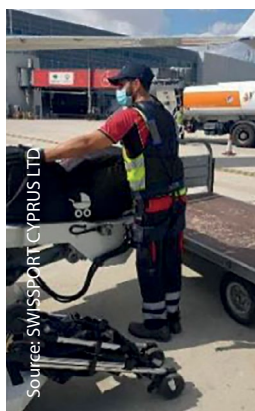
- Employees experienced reduced strain on the musculoskeletal system during manual handling, with better support while standing and/or in a crouching position.
- There was improved staff perception on health at work.

- Employees' satisfaction with management increased due to their active role and involvement in testing and decision-making.
- Laboratory results indicated that the intensity of muscular activities for an employee are reduced by up to 30% when wearing the LiftSuit.
- The exoskeletons eased the physical strain when loading/unloading luggage onto the aircraft, providing better support while standing and/or in a crouching position.
- In the long run, the results of this intervention could lead to lower rates of absenteeism due MSDs.



Success factors

- The company's focus on maintaining a healthy and safe work environment and its recognition of the need to reduce the risk of musculoskeletal strain during manual handling activities.
- The company's ability to evolve and invest in innovations, giving it a competitive advantage.
- Management's vision to develop a project based on the company's values (people, professionalism and partnership) that respect employees and their safety and health.
- The company's pioneering spirit to explore innovative options and improved solutions that achieve sustainable results with respect to efficiency, profitability and employee needs.



Transferability

This intervention could easily be adopted by other companies in air transportation services, as well as companies where manual handling is required.

Costs and benefits

Costs:

- Testing and on-site training of the LiftSuit exoskeleton

- Price for six LiftSuits
- Promotional material, such as posters and brochures, designed as part of the staff information campaign
- Working hours of the team leading the campaign

Benefits:

- Reduction in potential strain on the musculoskeletal system of workers performing manual handling activities
- Reduction in absenteeism related to musculoskeletal strain
- Increase in staff satisfaction
- Improved efficiency and productivity of employees
- Positive contribution to employees' wellbeing outside work
- General benefit to society through promoting and informing on innovative ideas (for example, other companies facing similar risks at work could exemplify and follow this good practice)

Key features of good practice example

- The introduction of the exoskeleton built on previous measures to reduce MSDs, as it was found that more needed to be done.
- The exoskeletons were introduced in a planned way, with full testing beforehand.
- Employee involvement was important, participating in testing and evaluating the exoskeleton.
- The company is committed to investing in new technologies and products that ultimately lead to a positive impact on the wellbeing of its employees.

Further information

Further information can be found at

<https://www.swissport.com/en/network/europe/cyprus/lca>
<https://www.swissport.com/en/network/europe/cyprus/pfo>

References and resources

Further information can be found at

<https://www.auxivo.com/liftsuit>

The exoskeletons eased the physical strain when loading/unloading luggage onto the aircraft, providing better support while standing and/or in a crouching position.

Promoting musculoskeletal health in the software industry through ergonomics



SAP SE

Germany

www.sap.com

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FOR EMPLOYEES AND MANAGERS

Safety Toolbox

German Version

Occupational Safety

Your Safety is our Purpose.

at the office at home mobile

Compliance & Responsibility

to the site

tools and information

For managers

- Compliance
- Safety Compass
- Functions Safety Compass

For employees

- Responsibility
- Safety Checks
- Safety Facts

For Safety & Fire Agents (SaFi) & Safety Officers (SiBe)

- FAQ: SaFi & SiBe (GER)
- SaFi & SiBe page (GER)
- SaFi & SiBe list

Background

Over 99% of SAP's employees work at the office, from home, or are mobile. Desk-based work is the norm in the software industry, which is also the case for most SAP employees. As a result, they are exposed to ergonomic problems in the work environment.

In 2020, according to the absenteeism report from the Techniker (TK) public health insurance fund for all TK-insured persons at SAP, MSDs accounted for 9.3% of all cases of incapacity to work.

Aims

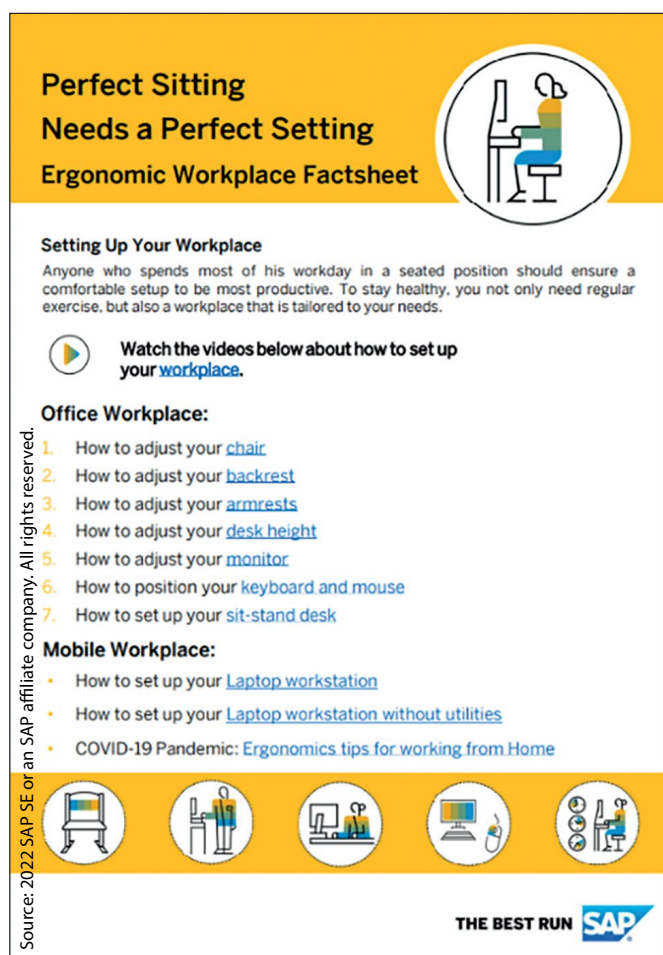
To promote musculoskeletal health and develop ergonomic workplaces to prevent MSDs.

What was done and how?

- SAP developed a comprehensive knowledge database called Safety Toolbox to promote awareness among employees and to avoid MSDs through an ergonomic workplace.

- The Safety Toolbox contains resources such as training materials, instructional videos and safety checks. It also includes information on how to set up an ergonomic workplace. For business travellers, advice is offered on all aspects of vehicles, including ergonomic and road-safe adjustment of the driver's seat and useful ergonomic tips when purchasing a new vehicle. The comprehensive toolbox also includes guidance on how to ensure ergonomic working conditions at the customer's site.
- To support managers, the Safety Compass module was added to the Safety Toolbox. Also available as a mobile app, it provides a tailored set of health and safety topics for work teams, as well as calendar and appointment functions. To-do lists are used to document the tasks performed, and reminders are sent for measures that have not yet been completed.
- In addition, SAP provides a wide range of sports and fitness courses to promote physical health.

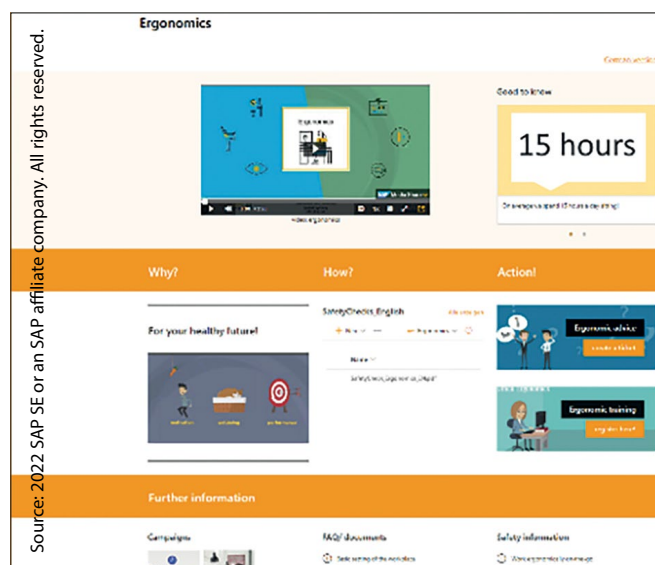
- The Safety Toolbox comprises 1,200 members and has been accessed about 13,700 times.
- In 2020, almost 3,000 individual ergonomics consultations and ergonomics workshops were conducted (nearly 2,000 participants in Germany).
- In 2020, 2,040 massages and over 2,700 physiotherapy treatments were performed to prevent and treat MSDs.
- Online ergonomics consultations were used close to 1,000 times in 2021 (until end of May).
- An ergonomics information video has been viewed about 4,600 times.
- Nearly 800 employees volunteered to attend the 17 virtual sessions of the 2020 Virtual Health Days.
- The introduction of the Safety Compass improved integration of OSH into team meetings and increased interest in prevention.
- Employees became more aware of and engaged in dealing with prevention topics.



Success factors

The Safety Toolbox has a simple user interface. Its contributions are adapted for work teams and various locations. It is continuously updated and regularly integrated into team meetings.

The Safety Compass is a preventive tool that is always available and particularly suitable for those working in separate geographical locations or spaces.



What was achieved?

- SAP takes a holistic and proactive approach to preventing MSDs. The aim of this approach is to integrate relevant OSH topics, such as ergonomics, into team meetings. This will improve health in the long term and increase interest in the prevention of MSDs.

Transferability

This approach could be adopted in companies from the same sector or by office-based organisations in which home-based teleworking is also allowed.

Costs and benefits

SAP's Business Health Culture Index (BHCI) measures the cultural environment, enabling employees to stay healthy and balanced. For example, 78% said they were in good health compared to others in their age group. Each BHCI percentage point has an impact on operating profit of €90-100 million, and it reached 80% in 2020.

The ergonomics prevention contributions can help prevent absences due to MSDs and increase job satisfaction.

Key features of good practice example

- The company developed a comprehensive knowledge database to promote ergonomics and prevent work-related MSDs.
- The initiative covers work in the office, at home, while travelling for business, and even at the customer's premises.
- The user-friendly Safety Toolbox contains a broad range of materials, from training to instructional videos.
- Managers can seamlessly integrate the Safety Toolbox and supplementary Safety Compass into team meetings and ergonomics consultations, regardless of where they are working.
- The Safety Toolbox and Safety Compass have raised employees' awareness of and interest in promoting OSH and preventing MSDs through ergonomics.

Further information

Further information can be found at <http://www.sap.com>

The comprehensive toolbox also includes guidance on how to ensure ergonomic working conditions at the customer's site.

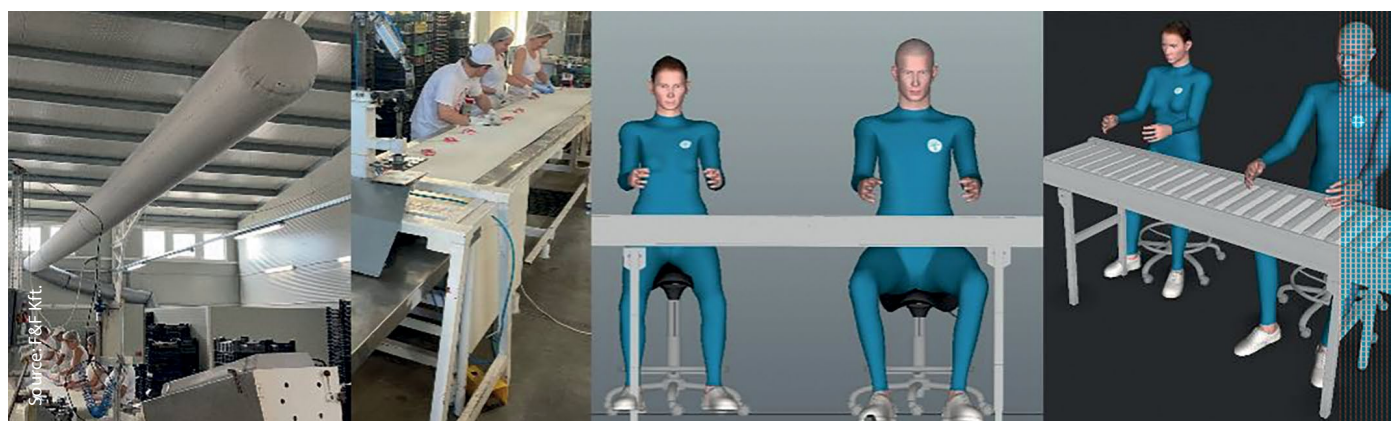
Planning and designing technical modifications on a sweet factory production line based on ergonomic principles



F&F Ltd.

Hungary

www.foltinandfoltin.hu



Background

F&F Ltd is a family-run business that places great importance on worker retention and a positive workforce attitude. It employs 16 people in the production of lollipops, 3 for office tasks, and 1 for maintenance and repair.

Management identified some MSD problems when they became involved in production.

Aims

To improve OSH conditions and reduce MSDs, the company planned and designed technical modifications based on identified risks on the production line.

What was done and how?

- F&F Ltd carried out a systematic risk assessment with the help of ergonomists to first identify the main ergonomic risks.
- An ergonomics consultancy examined posture, workstation design, load, exertion, mental load, work schedule, environment and occupational safety. The most significant problem was the high temperature generated by the technology.
- Workers were dressed in motion capture suits to record their movements while working. The resulting data was used to measure height and assess tool

and component appropriateness, storage, assembly activities, load handling, layout and specific features of each work process.

- On the production line, different body heights were identified as a primary ergonomics problem because they led to harmful bending of the spine and neck. The high load on the wrists and arms while using the cutting scissors and press was also highlighted in connection to some processes.
- On the production line, machine solutions replaced some tools. For example, a cutting machine was used instead of scissors, and pneumatic solutions were introduced at the press.
- Due to the growing number of orders, the company submitted a tender for an automated production line to use for orders where the handmade nature of the product is not a factor.
- For standing work, F&F Ltd ordered an anti-fatigue mat and employees were given new, more optimal footwear.
- During sugar preparation, a platform handcart was procured to remove the need to work with arms bent and raised.
- F&F Ltd also installed an air conditioning system alongside the production technology to provide more favourable temperature conditions.

- F&F Ltd plans to transform the current line of workplaces into sit-stand jobs and build a suitable station for packaging.

What was achieved?

Employees participated in the project and provided actionable feedback to develop practical solutions, including changes to equipment and tools. They understood the importance of the issue.

F&F Ltd was also able to incorporate other improvements in the manufacturing plant, but results of additional changes made recently are not yet evident.



Success factors

- F&F Ltd constantly involved employees in the development.
- Financial resources were made available to carry out the technical modifications.



- External experts were involved, whose analysis concerned the use of motion capture suits in risk assessment to pinpoint where the problems were.

Transferability

This is a good example of an ergonomics intervention in a small company, including a systematic risk assessment. The active involvement and participation of workers could be transferred to other Member States (regardless of the specificity of the risks identified and the preventive measures adopted).

Costs and benefits

The costs of the air conditioning, scissor lifting equipment and the cutting machine were reduced.

By introducing all the changes, the OSH conditions of employees are expected to improve, thus reducing MSDs.

Key features of good practice example

- This example from a small company made good use of systematic risk assessment with the support of an ergonomics consultancy. A computerised analysis of work movements and postures was made using an innovative motion capture approach. This was combined with active worker participation to assess risks and determine solutions.
- The company reduced ergonomic risks through a mix of automation, where possible, and technical solutions. Modified tools and equipment were introduced, for example, pneumatic tools and a platform handcart.
- This was complemented by more basic measures, such as the purchase of anti-fatigue mats and better work shoes for employees.
- At the same time, attention was given to safety issues, including the installation of an air conditioning system.

Further information

Further information can be found at <http://www.foltinandfoltin.hu>

Employees participated in the project and provided actionable feedback to develop practical solutions, including changes to equipment and tools.

New operating methods and adapted machinery for preventing musculoskeletal disorders in laundries



Servizi Italia Spa

Italy

www.servizitaliagroup.com



Background

Servizi Italia has been providing laundry and sterilisation services to the healthcare sector for over 30 years.

The company employs 1,963 workers divided among 9 laundry plants, 19 surgical instruments and textile sterilisation centres, and several wardrobes that are distributed throughout Italy.

The employees carry out activities involving the use of their upper limbs and trunk. These are associated with

ergonomic risk factors, such as repetitive movements, awkward postures, use of force and manual handling of loads.

Aims

The company intends to increase the wellbeing of employees by creating more ergonomic workstations and reducing the risk of MSDs.

What was done and how?

To conduct the risk assessment, the company decided to use wearable Wi-Fi technology (a wearable inertial system) for computerised analysis of movements and postures at the various workstations. This was done in collaboration with the ErgoCert certification body for ergonomics.

The software used allows the synchronisation of video and quantitative data on movements related to the work cycle, thereby assessing risks. The implemented limits are derived from the ISO 11228 series and ISO 11226. Video data were captured, when possible, from at least two operators per workstation who represented anthropometric extremes and performed the work cycles of interest several times. The analysis covers postures, repetition and duration.

Meetings were also held with the occupational physician and worker safety representatives that included sharing the results of the computerised analyses. They also consulted workers about suggestions for possible solutions and assessed them in collaboration with the production managers and the head of prevention.

Various changes were introduced, involving 17 production sites and 60 employees. The solutions comprised technical and organisational measures and training.

Three representative cases of the intervention:

Case 1: Introduce a bench for loading bags for washing

PROBLEM: Double lifting of laundry bags to be emptied onto the washer-extractor loading belt; lifting arms while shaking bags to release the contents.

Computerised analysis: Use of the shoulder for about 3% of the time above 80°, but for almost 15% of the time between 60° and 80°; repeated unsupported flexion of the trunk greater than 60°.

SOLUTION: Introduction of a bench on which to place the sacks when sorting the laundry. Trolleys were positioned to the side so the sacks dropped higher up on the bench and not behind the worker. Bags are now sorted when placed on a bench and not after they have been emptied. Workers are given on-the-job training sessions on the correct positioning of the trolley and instructed to use both upper limbs, not always the same one, when carrying out their tasks. Where necessary, the depth of the load compartment was increased, and progressive belt advancement was implemented.

Case 2: Raise conveyor belt height for manual sorting

PROBLEM: Sorting task involved raising arms according to the size of the (bed)sheets and the height of the sorting belt.

Computerised analysis: Use of raised shoulder and elbow for about 5% of the time; unsupported flexion of the trunk that increased in number and frequency.

SOLUTION: The height of the belt was raised by 10 cm to minimise bending of the shoulders and back, while automatic sheet unravelling systems and conveyor systems

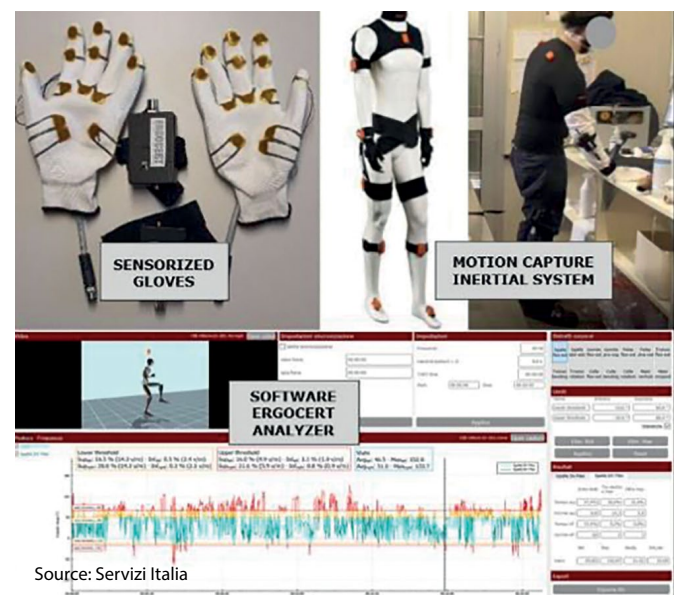
were introduced for moving the laundry items. Sorting trolleys were repositioned to reduce the distance items need to be thrown and arranged according to the item's frequency. Workers also rotate among four workstations. They also receive on-the-job training. For example, workers are instructed to use their elbows more than their shoulders.

Case 3: Adjust the trouser press

PROBLEM: Ironing trousers has a cycle time of 7-12 seconds and involved raising shoulders in a constrained position and bending the back.

Computerised analysis: Many female workers below 160 cm in height spent about 15% of the cycle time with arms raised above 80°; flexion of the lumbar spine greater than 20°.

SOLUTION: The company collaborated with the machinery manufacturer to find a technical solution for adapting the trouser press and eliminating the need for working with raised arms that included lowering the point where the trousers are inserted. Photocells were installed to replace the manual operation of a double control. Workers are rotated between loading and bending stations and are given on-the-job training. Other training in work methods covers folding cleaned laundry items and loading them onto trolleys ready for transportation.



What was achieved?

A 'dashboard' was developed for the occupational physician, summarising the assessments carried out and enabling better monitoring of physical fitness to work, limitations and task assignments.

In particular:

Case 1: Loading bags for washing

Limiting shoulder elevations to below 5% of the cycle time and reducing the workload by half. Reduction in trunk overload associated with bending and twisting.

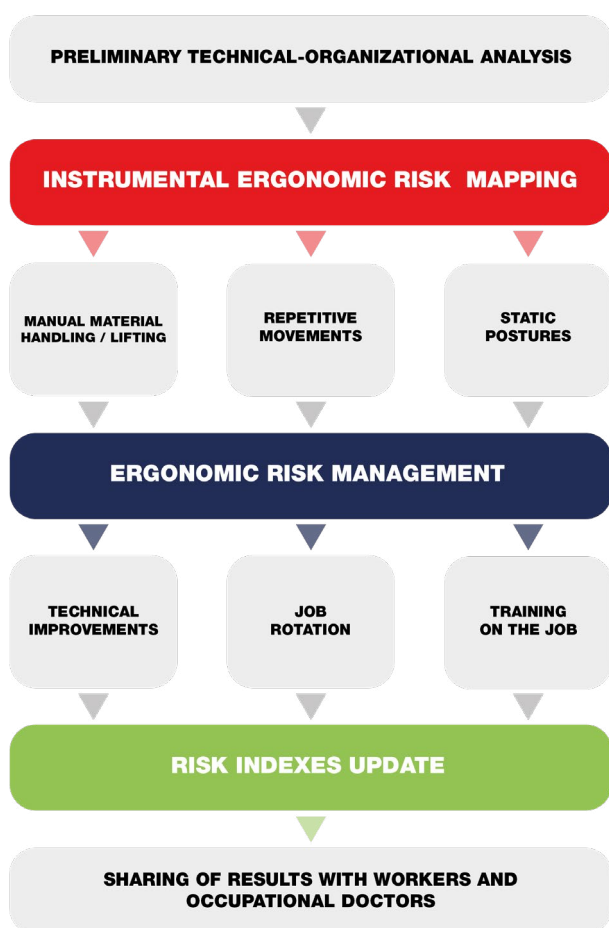
Case 2: Manual sorting belt height

Eliminating shoulder elevation, reducing force peaks and overload balancing. Limiting bending of the back.

Case 3: Adjustment of the trouser press

Eliminating the need to raise arms beyond 80° and reducing those exceeding 60° from 30% to 7%, and minimising flexion of the lumbar spine beyond 20°.

On-the-job training enabled the collection of additional suggestions for improvements.



Source: Servizi Italia

Success factors

- A combination of technical and organisational adaptation was used.
- Employees were involved along with the use of technical instrumentation.

- Employees were provided with on-the-job training on how to use the implemented solutions and improved work techniques.
- The inertial system improved the risk assessment by enabling precise identification of the riskiest elements of the tasks.

Transferability

The general approach to solutions is widely applicable. The use of a wearable inertial device to measure movement and posture could be adopted by a wide range of companies as a means of risk assessment and monitoring. The aspects of worker involvement are also applicable to different types of work.

Costs and benefits

- Ergonomic improvements led to the reduction of loads on the body.
- The benefits were objectively documented by data from the inertial system and computerised analysis of movement and posture.

Key features of good practice example

- A mix of solutions were used, including work equipment and layout changes to eliminate risky postures, task rotation and training in work techniques.
- The use of an inertial system for computerised analysis of movement and posture to pinpoint the riskiest factors and to reassess them after the implementation of ergonomics interventions is very useful. It not only enables accurate assessment of the interventions but also facilitates continuous monitoring of employees' postures and movements.
- Through the risk assessment process, workstations and equipment predominantly used by women were adapted to their body size.
- Worker involvement allowed validation of the technical assessments and was important for determining solutions.
- The results of the assessments were also summarised to create a tool to better assess workers' capability in carrying out the different tasks.

Further information

Further information can be found at <https://www.servizitaliagroup.com>

Through the risk assessment process, workstations and equipment predominantly used by women were adapted to their body size.

Preventing musculoskeletal injuries in a professional fishing equipment company



UAB Vonin Lithuania

Lithuania

www.vonin.eu



Source: UAB „Vonin Lithuania“

Background

UAB Vonin Lithuania manufactures fishing trawls and fish farming cages. Established in Šiauliai in 2013, the company has since expanded its production capacities and workforce. Currently, it employs 242 workers, of whom 80% are women.

In 2020, an automated sewing machine was purchased that performs loop sewing work four times faster than operators and eliminates the physical workload for employees. However, some customers require the ropes/nets to be sewn by hand in the traditional way.

For five consecutive days or more, operators must sew around loops woven into the 22 mm-thick carcass rope and net using a spool. Stitches must be sewn every 1.52 cm and the thread of the winding around the rope firmly tightened

using the physical force of one hand while holding the rope with the other.

The work process was monitored, and the force applied during the clamping-tensioning of the thread by hand using a spool was measured. A resisting load of 10-12 kg is experienced by the hand during the tensioning of the winding thread. When the winding is tensioned, the instantaneous load reaches a resisting force of 20-30 kg in the final tensile cycle. The operators perform around 1,800 such movements per shift and can experience an even greater resisting force.

In 2019, the company recorded three accidents in which employees suffered shoulder muscle and joint sprains. It also observed significant staff turnover. Therefore, as the fundamental work process cannot be changed, attention was turned to employee training in sewing techniques and

more frequent rotation of the staff from one workplace to another to prevent MSDs.

Aims

The company intends to increase awareness among operators regarding proper ergonomic working postures and methods that can help to prevent MSDs.

What was done and how?

- A risk assessment of the operators' workplace was performed. Physiotherapists were consulted and a number of preventive measures were implemented. Rotation of employees performing work with increased physical load was introduced. Employees can now rotate tasks in the event of muscle fatigue.
- Consultation with physiotherapists concluded that during their work operators used only the shoulder and arm muscles, but not the muscles of the back, chest, waist and legs. It was also found that the standing and sitting postures needed to be improved, the height of the workplace required attention and there was a lack of awareness about the importance of correctly setting up workstations.
- In a task that must be done manually, ergonomics training for operators emphasises the importance of correct working methods to reduce the load on the body. Other working methods are explained to protect the wrist, hands and elbow joints, in particular working with a neutral wrist position, how to avoid hitting with the hand when working with a spool (to protect the elbow joint) and how to pull the thread using the force of the whole body's muscles.
- Team leaders attended ergonomics training to be able to correct and instruct operators who are performing work in a non-ergonomic manner.
- Short five-minute exercises were introduced at the beginning of work shifts to warm up the muscles and joints of the whole body.
- Employees are able to exercise with a professional trainer, before or after work, to strengthen the muscles of the whole body, using their body weight (at a level depending on individual ability). Training includes exercises for load lifting, pulling and pushing similar to the actions performed during work.
- Special attention is now given to occupational risk factors during induction training, periodic instruction and internal control activities.
- The trainers pay special attention to new recruits and their ergonomics training and task rotation.
- Wrist and elbow splints are available for all operators to alleviate pain, if needed.

What was achieved?

- The company immediately responded to new risk factors when employees reported them, ensuring all incidents were investigated.
- The company saw higher job satisfaction and lower staff turnover.
- The risk of shoulder sprain for operators was minimised.
- In 2020, there were no accidents associated with MSDs or other factors.



Success factors

- There was a swift response to newly emerged risk factors and involvement of employees in finding solutions.
- The company consulted with specialists in their field (ergonomist, physical activity specialist).
- Training for employees and employer's representatives was carried out.
- Occupational safety and health were included in internal control.



Transferability

The approach of providing expert ergonomics training in work methods and physical exercise can easily be adapted by other companies where workers are required to perform repetitive manual tasks causing strain to certain muscles that cannot be eliminated by technical or organisational changes.

Costs and benefits

Costs:

- €120 per month (physical activity specialist)
- €400 (training equipment)
- €200 (ergonomics training (flat-rate fee))
- 10 hours over a period of 3 months (time spent on ergonomics training)

Benefits:

- No lost working days due to work-related MSDs
- Employees motivated to report risks as the employer now responds quickly.

Key features of good practice example

- As many tasks must be completed manually, a careful analysis was carried out to find the safest method of working.
- Ergonomics training and physical exercise have provided operators with knowledge on how to perform their work tasks in a safer manner and how to avoid injury by using muscles of the entire body, rather than overexerting specific ones.
- Rotation of tasks also helps to reduce risks.

Further information

Further information can be found at

<https://vonin.eu>

In a task that must be done manually, ergonomics training for operators emphasises the importance of correct working methods to reduce the load on the body.

Implementing customised solutions to heavy lifting in a metalworking company



SIA Silkeborg Spaantagning Baltic

Latvia

www.mssp.group



Background

SIA Silkeborg Spaantagning Baltic is a metalworking company in Latvia. Its production process includes such operations as producing customised parts using computer numeric control turning and milling on metalworking equipment, welding, cutting metal and other materials on automatic and manual saws, degreasing and pickling of stainless steel. Handling of weights and physical work are some of the company's most significant workplace hazards.

Heavy materials and parts are present in the production process at all stages, and they frequently vary in size and weight. Therefore, it is often difficult to use standard lifting equipment (cranes, forklifts, pallet trucks).

Aims

The company aims to create a safe and ergonomic workplace using practical solutions for the handling and lifting of heavy loads.

What was done and how?

Some problems were company-specific, in which case it was difficult to purchase ready-made equipment to solve the problem. It was also necessary to find solutions to manual lifting and physical strain that could be used by all employees working at the specific workstations.

The following problems were identified:

1. Milling tools had to be placed very tightly in the milling tool holders, which was done by hand, by supporting the tool holder against a table or securing the tool holder with vices. These activities required a lot of physical effort and posed an accident risk due to uncomfortable working postures.
2. The specific weight and size of parts called motors were in principle impossible to grip with a crane hook or secure with lifting straps.

3. The equipment runs using emulsion, which must be refilled at least once per shift at each workstation. From the main filling point, employees had to lift and carry to the workstation filled emulsion cans weighing up to 20 kg.
4. Finished products for shipment were packed in boxes that were placed on pallets located on the ground. As a result, warehouse employees had to reload and lift several boxes weighing up to 15 kg while bending over the pallets.

Altogether, 23 smaller solutions were implemented to improve ergonomics and reduce manual handling. Practical solutions were based on the ideas, designs and handiwork of the employees themselves, and included the following:

1. **Tool holder stands at workstations:** Two options were presented. An employee designed and created a special tool holder stand in which the tool holder can be inserted and repositioned, making it convenient and relatively easy to attach the required tool. For the second option, the employee adapted a ready-made stand that allowed the holder to be placed at eight different angles. The tool holders not only improve work postures but also reduce the risk of accidents.
2. **Motor holders:** Employees created special holders in which the 100 kg motors could be safely and easily fastened to the crane hook, thus making it possible to lift them by crane.
3. **Emulsion trolley:** Using available materials, employees created a trolley to carry the emulsion cans, thus eliminating a lot of extra manual lifting.
4. **Improving the warehouse workplace:** After consulting with the employees, it was decided that the best solution was to create a packing table of appropriate size on which the boxes could be moved and lifted at a comfortable height. With the change, the warehouse employees now move the boxes in the 'power zone' (elbow height), which reduces the risk of injury during lifting.

What was achieved?

After implementing these solutions, the following planned results were achieved:

- safer and more convenient lifting at the workstations where motors are lifted, as well as in the warehouse;
- more comfortable working positions when performing work that requires physical effort (placing tools in the tool holder); and
- reduced manual lifting by introducing the trolley to transport the emulsion cans.



Success factors

- Employees were involved in identifying problems in their work environment and used their technical know-how to design and create solutions. Workers' ideas are gathered on an ongoing basis, for example, through channels for them to submit individual ideas and perform brainstorming sessions.
- Following the philosophy of 'What to do when there is nothing to do', the company made use of low production periods to allocate time and resources to developing and implementing ergonomic solutions in the workplace.
- Internal resources were efficiently used to implement solutions by recycling available materials such as waste from other production processes.



Transferability

The concept of producing tailor-made devices to improve ergonomics within the workplace and by employees themselves may not be transferable to all fields of work. However, the idea of involving employees in finding, designing and developing solutions, especially during periods when work is slow, could be transferred to many companies in different industries.

Costs and benefits

Costs:

- Low cost of materials by recycling waste metal from other processes
- Efficient use of employee time to design and create solutions during slow periods in production

Benefits:

- Reduced risk of musculoskeletal disorders
- Reduced risk of injury and accidents
- Improved working postures
- Improved ergonomic lifting

Key features of good practice example

- The company found and created customised solutions to reduce manual lifting of heavy loads and physically demanding work tasks where standard mechanical lifting solutions could not be used.
- They set an example by taking advantage of their own time, skilled workforce and material resources to create the tailor-made solutions.
- Strong worker involvement meant that workable solutions could be identified and implemented.

Further information

Further information can be found at

<https://mssp.group>

<https://www.facebook.com/SilkeborgSpaantagningBaltic>

The company found and created customised solutions to reduce manual lifting of heavy loads and physically demanding work tasks where standard mechanical lifting solutions could not be used.

Promoting workplace safety and physical and mental health in an insurance company



Zavarovalnica Triglav, d.d.

Slovenia

www.triglav.eu



Source: Zavarovalnica Triglav, d. d.

Background

Zavarovalnica Triglav, d.d. is a multinational insurance company. Its headquarters are in Ljubljana, Slovenia, with subsidiary offices in Bosnia and Herzegovina, Croatia, Montenegro, North Macedonia and Serbia. In June 2021, the company consisted of 2,250 employees.

While office work may be safer than factory work, computer use carries the risk of developing MSDs.

Zavarovalnica Triglav, d.d. implements a number of measures to manage and prevent MSDs in the organisation. The company maintains that it is critical to raise awareness and encourage employees to live a healthy lifestyle.

Aims

The company wants to create conditions for employees to be healthy and satisfied at work, to feel a part of the company, to strive for personal development and to take care of their health as an everyday habit. This includes in the office and when working from home.

What was done and how?

A variety of activities were carried out within the organisation's existing system for risk prevention and management. These included strict compliance with OSH legislation, promotion of health at work, and provision of personal protective equipment and safety devices. In addition, employee awareness and education covered office work assignments and manual handling, appropriate working conditions, ergonomic workplace arrangements and a chronic disease management programme.

The specific measures are listed here:

- Provision of practical tips for a safe and comfortable work environment at home, including online workshops with a kinesiologist.
- Cooperation with an occupational physician to analyse sick leave, conduct risk assessment, and plan prevention activities such as ergonomics and education.
- Provision of additional work equipment and accessories and adjustment of workplaces, based on individual



Source: Zavarovalnica Triglav, d. d.

assessments. These include wheeled backpacks, a special ergonomic mouse, specific seating and sit-stand desks.

- Advice and instruction to employees on ergonomic workplace arrangements from an OSH professional.
- Issuance of leaflets to new employees and provision of training every three years.
- Provision of a poster for correct sitting position.
- Installation of stickers to encourage the use of stairs rather than elevators (walking rather than taking the lift).
- Provision of 15-minute workplace back massages organised monthly.
- Provision of a programme of subsidised health days tailored to young and old. This includes visits to a local spa.
- Active breaks – this is an exercise session run by physical education teachers twice a week online.
- Employee training, for example, to promote an active lifestyle, healthy spine and movement workshops with a kinesiologist, building resistance to stress and burnout.
- Awareness raising through articles published on the company intranet.
- Psychological support for employees in the form of counselling.

- Project Idea IN [innovation] – a worker suggestion scheme.
- Possibility of free use of vacant Zavarovalnica Triglav, d.d. holiday units for employees with disabilities.

What was achieved?

- Decrease in sick leave between 2019 (23%) and 2020 (19%)
- Three hundred employees participated in exercise breaks
- Increased employee motivation and positive response to health days

Success factors

- Risks were prevented and kept to a minimum by combining prevention measures with health promotion. Key factors include:
 - taking a holistic approach and covering both mental and physical risks;
 - health promotion measures being rooted in prevention;
 - strong leadership;
 - implementing both short- and long-term actions; and
 - encouraging innovation by involving all employees and applying their proposed solutions.



Source: Zavarovalnica Triglav, d. d.

Transferability

The approach of a holistic OSH prevention and promotion system could be easily adopted by companies of different sizes in Member States that employ staff who work in an office or remotely from home.

Costs and benefits

Investing in employee prevention programmes is estimated to cost around €150,000 per year. This finances a variety of programmes and employee labour costs. Savings result from lowering the cost of absenteeism.

Employee care programmes and activities are aimed at maintaining employees' physical and mental health. These are measured in wellbeing through an annual survey of organisational vitality (ORVI index) in which the following scored highly:

- employee satisfaction
- work environment
- employee engagement

Key features of good practice example

- The company created and maintained a comprehensive and strategic approach to ensuring workplace safety and health at both the office and the home.
- The holistic approach addresses both mental and physical health through ergonomic measures, the promotion of physical activity and awareness raising.
- The provision of ergonomic equipment was tailored to individuals.

Further information

Further information can be found at <https://www.triglav.eu>

The holistic approach addresses both mental and physical health through ergonomic measures, the promotion of physical activity and awareness raising.

Preventing back strain in concrete production

COMMENDED

Rohrdorfer Transportbeton GmbH

Austria

www.rohrdorfer.at



Background

Rohrdorfer Transportbeton is an Austrian company that produces and supplies all types of ready-mixed concrete. It operates 36 concrete plants mainly in the East, North and South of Austria. The company has more than 250 concrete mixer trucks available to transport concrete to construction sites.

MSDs are among the most common occupational illnesses due to the non-ergonomic way in which heavy loads are handled. Heavy lifting or work that involves carrying strains the back and spine. The consequences include strain with chronic pain and pathological changes, in particular in the intervertebral discs. This often leads to absence due to illness and often an inability to work. Alongside individual interventions in the case of back strain at work, technical interventions are essential preventive measures.

A simple, cost-effective solution has removed a significant risk, contributing to the company's general approach to developing safe workplaces that meet age-related needs. This method includes designing software for system control, screen monitor equipment, and individual measures like occupational medical examinations and support in the case of the development of long-sightedness.

To encourage employees to play an active role in occupational safety and health, the company has a reporting system that enables them to indicate hazardous or stressful conditions in the workplace. In this way, appropriate preventive solutions were found through staff involvement.

Another part of the approach is the systematic survey of work-related stress that can also be seen in connection with the consequences of the strain caused by MSDs.

The general approach to creating age-appropriate working conditions is continuously coordinated and complemented by the company's management and board, together with the preventive specialists and works council representatives. The goal is to promote and maintain employee loyalty amid tight labour market conditions by ensuring an attractive workplace.

Aims

The intervention aims to reduce back strain and related MSDs for workers by reducing the load as they manually lift and empty heavy packages into the concrete mixer trucks.

What was done and how?

The following problem was identified:

In the production of fibre-reinforced concrete, steel fibres are fed into the drum of the concrete mixer truck. The steel fibres are packed in boxes of 20 kg. These packages are supplied on pallets from which they had to be removed manually and emptied into the drum. With the existing work method, as the packages were removed, the workers had to increasingly bend much more as the pile was reduced. This meant that the workers had to endure strain when lifting, and rotate their spine, causing considerable stress on their intervertebral discs. The consequences were physical strain and the risk of intervertebral disc injury, as well as medical conditions leading to temporary incapacity for work.

The amount of work carried out in these unsuitable conditions was considerable. Each concrete mixer truck requires 8 packages of 20 kg, so the total load handled by the worker is 160 kg per mixer truck. Between 5 and 10 mixer trucks have to be filled each day.

The following solution was introduced:

To maintain the lifting height of the packages at the same level, and thus avoid bending down, a floor conveyor with a scissor lift table was designed for the pallets of fibre-reinforced concrete packages. This allows the pallets to be handled in such a way that workers do not need to rotate their spine to feed the steel fibres into the drum, while the pickup height can also be lowered again by operating a pedal lift. Therefore, the worker does not need to bend down.

What was achieved?

- Back strain has been reduced and the task of filling the concrete mixer trucks is much safer for workers.
- The measure has improved working conditions and prevents workers from being absent due to illness.
- Older employees can continue to perform their duties safely.



Success factors

- The workers were very satisfied with the solution and the work environment has improved.
- Workforce loyalty has increased in the context of a tight labour market, staff turnover has decreased and product quality is ensured for customers.

Transferability

The simple solution of introducing a scissor lift table to reduce loads during manual lifting is fully transferable to other companies in the construction sector. It could easily be adopted by organisations in other sectors where manual lifting is required.



Source: Rohsdorfer Transportbeton GmbH

Costs and benefits

The cost of the scissor lift table was €800, whereas the cost of a worker being unable to work for 2 weeks would be €1,500. The cost of the investment was paid off in a year.

Employees were satisfied with the solution and can perform their work faster without undue back/spinal strain.

Despite the cost pressures on the company, these tangible improvements in the workplace are making the company a more attractive place to work at.

Key features of good practice example

- A simple, cost-effective solution has removed a significant risk.
- The company is committed to developing safe workplaces that enable older workers to continue to perform their work. This also helps to maintain their loyalty to the company and reduces staff turnover.
- The company involves the works council, and employees are encouraged to report hazardous and stressful conditions in the workplace, thus involving them in finding preventive solutions.

Further information

Further information can be found at <https://www.rohrdorfer.at>

A simple, cost-effective solution has removed a significant risk, contributing to the company's general approach to developing safe workplaces that meet age-related needs.

Integrating ergonomics into corporate culture in a hospital group

COMMENDED

GZA Ziekenhuizen/ IDEWE

Belgium

<https://www.gzaziekenhuizen.be>



Source: © GZA Ziekenhuizen

Background

The GZA Ziekenhuizen group of hospitals with 3200 employees and 465 doctors has been using the services of IDEWE ergonomics prevention advisers for around 15 years. In 2013, an ergonomics policy was produced, setting out objectives and strategies. GZA Ziekenhuizen aims to ensure that ergonomics is part of the hospitals' organisational culture.

The DuPont Bradley Curve (a tool to analyse the progressive maturity of a safety culture by looking at a spectrum of behaviours and attitudes) is used to evaluate the group's ergonomics policy, illustrating the stages in its progress towards excellence. According to the curve, most departments were at the dependent stage (following rules), while some were already at the independent stage (individual responsibility). None of the departments were at the interdependent stage (responsible for yourself and others).

Aims

The aim is for GZA Ziekenhuizen to develop a sustainable ergonomics culture across the entire organisation through consultation with experts and the active participation of employees at all levels.

What was done and how?

A central ergonomics steering committee composed of policy-makers from different departments was established to increase support among staff. Integrating ergonomics into the strategies of other policy areas ensured it becomes embedded throughout the organisation. A dedicated ergonomics officer played a key role by providing advice within the workplace and at workplace meetings. If they are unavailable, the ergonomists can be contacted by email and will respond within a week.

- As part of the preventive ergonomics drive to create an adapted workplace and provide suitable equipment, reception desk design guidelines were developed, advice on ergonomics given when buying equipment, and the GZA Ziekenhuizen intranet used to raise awareness of the ergonomic equipment required.
- The internal prevention service carries out a risk analysis of each service every three years. The ergonomist contacts the manager to ensure that any identified problems are tackled within six months and the necessary training provided, if required.
- Staff can submit an electronic form to request advice. Standard advice will be available on the intranet in the future.
- All new staff members receive ergonomics training when hired.
- Regular risk analyses ensure effective compliance with the ergonomics policy.
- The online self-assessment 'Optidesk' tool was used to map health risks to staff working with display screen equipment both in the workplace and in remote working, and to produce an action plan.
- Staff are closely monitored during return to work. Work accidents leading to MSDs are investigated and measures for improvement proposed.

What was achieved?

The written ergonomics policy is evolving into a practical ergonomics culture, which is demonstrated by a drop in absence due to MSDs. Statistics based on questions asked during medical examinations indicate that GZA Ziekenhuizen scores above the benchmark on the following parameters over the past five years:

- MSDs account for an average of 14% of sick leave (benchmark average: 17.5%);
- the average percentage of sick leave days due to MSDs is 11.8% (benchmark average: 17.23%); and
- the average number of sick leave days due to MSDs is 15.75 (benchmark average: 24.75 days).

Success factors

The success of the ergonomics policy can be attributed to many complementary factors that reinforce each other:

- ergonomics is integrated into the strategies of other policy areas;
- senior management is committed to and involved in ergonomics;
- an ergonomics expert must work with other internal experts;
- ergonomics is presented in a positive light;



- ergonomics solutions address the source of the problem;
- a systematic approach is taken to the ergonomics policy;
- priority is given to quick wins;
- GZA Ziekenhuizen opts for a participative approach to ergonomics that involves everyone;
- both a bottom-up and a top-down approach are taken, which gets the message across to everyone.

Transferability

This holistic approach is transferable to other organisations like hospitals, but also to organisations in other sectors. Due to the relatively high costs involved in developing an ergonomics policy, hiring professional ergonomics services, providing training and purchasing equipment, this approach is better suited to large organisations. However, many aspects and measures could easily be adopted by medium and small enterprises on a smaller scale.

Costs and benefits

Developing an ergonomics policy is expensive (training, appointing ergonomists, acquiring equipment), but it avoids long-term incapacity and early departure from the workplace. Healthier staff are more productive and happier, which means that patients are also happier. In this sense, it can be argued that ergonomics boosts profits.



Source: © GZA Ziekenhuizen

Key features of good practice example

- This initiative demonstrates a holistic approach with attention to the design and risk analysis of the workstation, training and reintegration.
- It is a participative, multidisciplinary approach with concrete practical solutions or adjustments.
- The organisation sets specific goals, such as reaching the interdependence stage of the DuPont Bradley Curve and reducing long-term sick leave to below 6% by 2025.
- It advocates occupational safety and health and ergonomic ownership for all.

Further information

Further information can be found at <https://www.gzaziekenhuizen.be>

References and resources

<https://www.idewe.be>

As part of a holistic approach, staff are closely monitored during return to work and incidents of MSDs are investigated and measures for improvement proposed.

Introducing technical solutions in a meat production company to prevent musculoskeletal disorders

COMMENDED

Elaborados Julián Mairal S.L.

Spain

www.julianmairal.com

Background

The core business of Elaborados Julián Mairal SL in Spain is the production of pork loin, which accounts for 90% of its activities. The production process includes several stages: reception, weighing, salting, maceration, marinating, stuffing, hanging and drying.

Several of these stages involve considerable physical effort on the part of workers. Pork loins are transferred from a large plastic container on the floor to a stainless steel tank for weighing and then salting. The same procedure is repeated during the marinating stage.

When performing this activity, two operators stand next to the box. To pick up the pork loins from the box, the workers must repeatedly bend over into the container, with their legs straight. The worker's back must support the entire weight of the action, which constitutes a very high risk of overexertion.

The loin hanging stage involves an operator placing 5 to 7 loins (weighing 15-21 kg) on a bar, which then must be lifted by hand and placed on the rack. The racks are arranged in two heights and the employee must climb a ladder to place the loins on the top of the rack.

The bar holding the fresh loins must be lifted above shoulder height to place it on the supports. Because the operators work in a humid environment with meat residues, the accident risk is very high.

Aims

The company aims to prevent work-related MSDs by consulting with an external prevention service and involving managers and employees in finding solutions.

What was done and how?

Management and the quality and technical department examined different options for reducing risks. They identified the following:



- A hydraulic box tipper was purchased for the loin weighing stage to position the box at the worker's height.
- The tailor-made tipper consists of mobile arms that can be fully raised to position the box or pallet horizontally so that the contents can be removed without the employee bending over.
- This means that the employees are always standing upright and do not need to perform any awkward turns that could lead to overloads, especially in the lumbar area.
- For the hanging stage, a pneumatic rack lowering device was installed that drives the rack by means of a compressed air system and can lower it almost to the floor.
- Because the system is adaptable, the rack can be lowered to the optimum height for each operator,

minimising the risk of overexertion by having to work above shoulder height.

- It is no longer necessary to climb any steps to place the bars on the upper part of the racks, thus avoiding the risk of falling.

What was achieved?

- The new equipment enabled the company to minimise the risk of overexertion and falls by the workers.
- The workers have a very positive attitude towards the new equipment (tipper, lowering device) as it makes their daily workload much easier.
- Workers can work more safely, without overexerting themselves and with much greater flexibility.



Transferability

Such company-wide commitment to OSH risk prevention is fully transferable to other small or large businesses but could also be transferred to organisations in other industries. The highly effective technical measure for preventing MSDs is transferable, especially in the meat sector where risks are greater.

Costs and benefits

Employees work more efficiently, flexibly and safely since acquiring and installing the new equipment. Overexertion and falls have been minimised. Accidents are currently down to zero.

Key features of good practice example

- Company management, workers and external providers collaborate seamlessly to find solutions in preventing MSDs.
- The acquisition and installation of two new pieces of equipment for various stages of the pork loin production process makes the work much more efficient, safe and flexible.

Further information

Further information can be found at <https://www.julianmairal.com>



Success factors

- Company's overall commitment to OSH risk prevention.
- Management's dedication to improving the working conditions of company workers based on a study to find the best options for reducing OSH risks.
- Collaborating with existing plant suppliers to obtain bespoke solutions.

Management believes that OSH risk prevention is a fundamental goal to be achieved. Therefore, everyone is committed to ensuring a safe and healthy working environment.

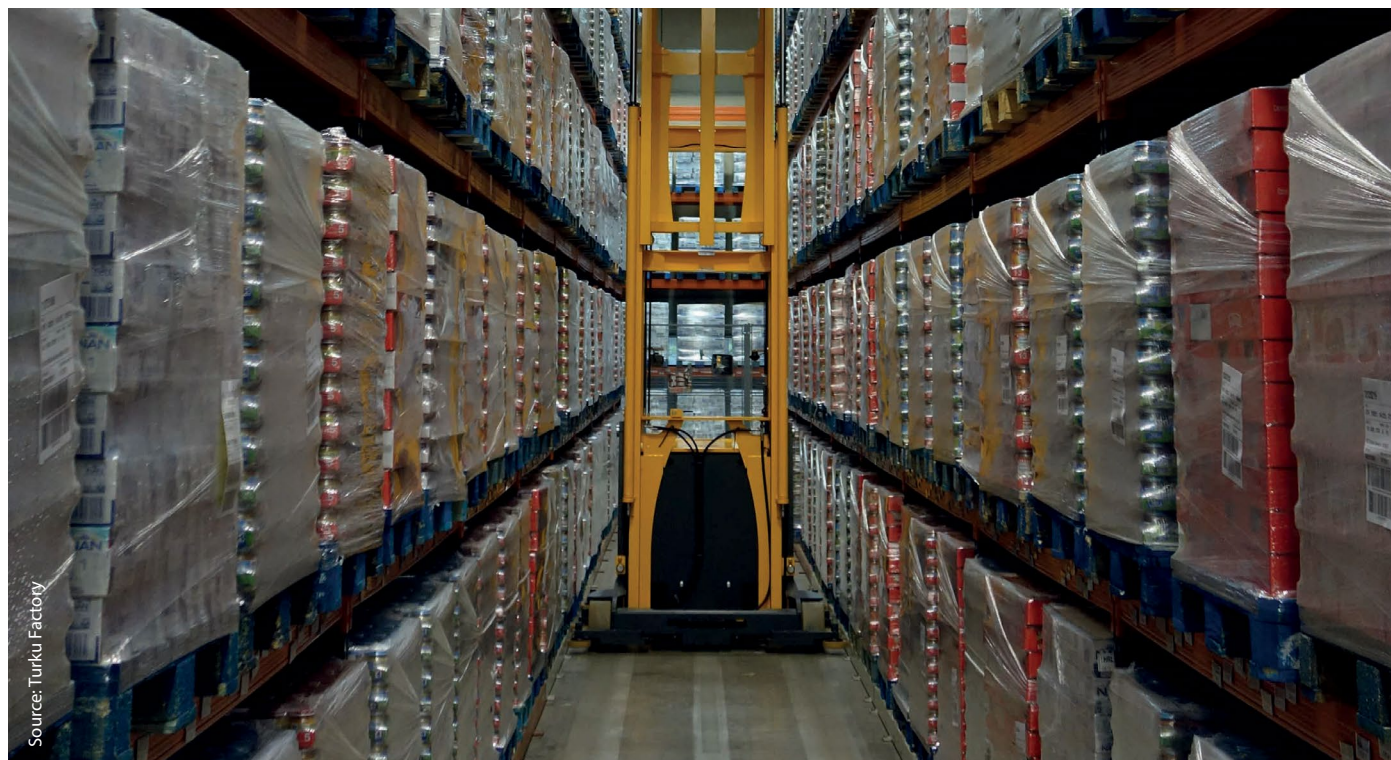
Improving ergonomics through multi-professional cooperation in the food industry

COMMENDED

Suomen Nestlé Oy, Turku factory

Finland

www.nestle.fi



Background

In 2014, the factory's management team initiated an investigation into sick leave. MSDs were found to be the main reason for absenteeism. Therefore, management decided to make a determined effort to improve ergonomics.

At the factory, the employees do shift work. Most production work involves lifting heavy sacks and boxes and pushing and dragging packages. These tasks are associated with awkward working postures and repetitive strain. Employees often work in hot and damp conditions and in a noisy environment. Identified stress factors also include the constant need for monitoring and repeated interruptions.

Physical exhaustion and pain adversely affect performance and also increase psychological stress, with the effects of this reflected in the wellbeing at work of all the staff, the safety culture and productivity at the factory. Improved ergonomics was seen as something that would benefit everyone. By investing in better work methods and

conditions, the company not only aimed to prevent injury in the workplace, but also to improve employees' psychological wellbeing.

Aims

Through a variety of measures, the organisation aims to improve work methods and conditions to prevent MSDs, to support recovery for workers suffering from MSDs and to promote overall employee fitness and wellbeing.

What was done and how?

The management team at the factory decided to initiate a large-scale intervention to prevent MSDs. This included the participation of an OSH organisation, senior management, occupational healthcare staff and all other employees. Besides MSD prevention, the company was interested in promoting practices to maintain fitness for work and support recovery.

To raise staff awareness, in 2019 management launched an ergonomics card project that involved disseminating general basic ergonomics training materials for each work section and factory operation. The material includes examples of ergonomics in production and dispatch, tips on recovery and how to sleep well, and guidelines for looking after physical health even when not at work.

In addition, the factory has:

- drawn up a list of questions for the safety discussions that the management team and supervisors have with employees regularly;
- acquired lighter equipment and machinery based on the recommendations of the occupational healthcare staff and by consulting the employees;
- encouraged keep-fit exercises and fitness practices by acquiring gym equipment for use during work breaks;
- updated the ergonomically correct procedures in the work instructions at the factory with illustrative photographs;
- practised appropriate ways of moving in practical training sessions run by occupational healthcare staff;
- provided targeted guidance for employees with similar problems (there is a shoulder group, for example); and
- clarified purchasing practices and responsibilities to speed up ergonomic improvements in the area.

The factory also promoted the return to work of employees with MSD symptoms through multi-professional cooperation among management supervisors, the workplace doctor, an occupational physiotherapist, staff and the OSH organisation.

The key factors to enable staff to return to work have been to guarantee good care, instructions on staff rehabilitation on a voluntary basis, guidance and instruction on correct work methods and postures that put less strain on the body, working arrangements and the strong commitment of all concerned, trust and cooperation (see video 'Preventing musculoskeletal disorders at work', link below).

What was achieved?

Long-term, broad-based, multi-professional cooperation has improved the entire safety culture. The results can be measured, for example, in the number of accident-free days, the positive trend in the sick leave statistics and through wellbeing-at-work surveys.

Between 2018 and 2020, the number of sick leave days associated with MSDs dropped from 1,650 to 441.

There has also been positive feedback from staff about the genuine desire of management to listen to ideas and improve working methods and conditions.



Success factors

- Management's decision to make a determined effort to improve ergonomics in the workplace.
- Seamless cooperation with occupational healthcare staff.
- Interdepartmental cooperation: at each level of the organisation, willing staff are involved in developing ergonomics at the factory and making known the views and ideas for improvement in the area of the operation that they represent.
- Financial investment, to purchase equipment and in the scope and quality of the work of occupational healthcare staff, was seen as a significant contribution to making progress.

Transferability

The intervention can easily be adopted by other workplaces in other industry sectors. Many of the measures are transferable to large, medium and small enterprises.

Costs and benefits

Direct costs include the purchase of equipment and the training sessions from external occupational health specialists. These have been recovered many times over in terms of the considerable reduction in sick leave. The

measures have also impacted the staff's general ability to cope and get through the day. Working together, they found ways to deal with their problems and prevent situations from worsening. The benefits and improvements achieved are also reflected in the staff's general wellbeing and their energy for their own free time.



Further information

Further information can be found at <https://www.nestle.fi>

References and resources

'Preventing musculoskeletal disorders at work' (subtitles in English) presents the measures taken at the Turku factories. The video was produced in cooperation with Nestlé Turku and the Centre for Occupational Safety sector group.

https://www.youtube.com/watch?v=Xv4eHp_wMI0&t=4s

The company implemented many different versatile and simple measures to prevent MSDs and to find solutions for people with existing MSDs to continue working.

Key features of good practice example

- The company implemented many different versatile and simple measures to prevent MSDs and to find solutions for people with existing MSDs to continue working.
- The role of leadership, continuous discussions involving the entire working community, and its impact on work safety and risk prevention are clearly defined.
- The commitment of the leaders to take action is evident, as is that of the workers and multi-professional occupational healthcare unit.
- The company provided training and materials on ergonomics, included ergonomics in the regular work safety discussions, updated work instructions, and rehearsed correct work movements and postures for work tasks.
- The preventive measures are taken in both the factory and administration office.

Large-scale prevention training for social and healthcare workers through an adaptable ergonomics model

COMMENDED

Siun sote – Joint municipal authority for North Karelia social and health services

Finland

www.siunsote.fi



Background

Siun sote employs around 7,300 social and healthcare workers and professionals providing support services. The employees are divided into five different service areas and those employed by the Rescue Department. The factors causing musculoskeletal strain are similar in all service areas, but how significant those factors are can vary based on the type of work involved and the surroundings.

Those employed in healthcare and medical services work on wards, in reception facilities or centres, operating theatres, oral healthcare, rehabilitation, and in the areas of healthcare in schools and for students.

The work associated with services for the elderly mainly takes the form of care and support work in hospital wards, housing units (residential care) and home care.

Those employed in family and social services generally work in healthcare centres. This also includes staff at child welfare units and those working in services for people with disabilities. The work at child welfare units mainly involves providing children and young people with guidance and instruction. The disability service usually involves care and support work at various housing units, healthcare centres and other service centres.

The Rescue Department mainly employs personnel providing first aid and emergency care, or are involved in rescue operations. In rescue work, musculoskeletal strain is made worse by the heavy equipment used and the challenging conditions in which operations are carried out.

Most of the employees work in healthcare (72%) and social work (11%), and 84% are women with 28% between the ages of 50 and 59.

Risk assessments are conducted by Siun sote for each unit every year in the electronic reporting system (HaiPro). Keeping the risk assessments up to date is the responsibility of the heads of units, but the assessments for each unit are done using a customised operating model in which occupational safety and health representatives play a key role.

The risk assessments indicated that the following physical factors contribute towards musculoskeletal strain: moving and handling patients/clients, awkward postures at work and when using tools and equipment, and restrictive interventions in violent situations.

Risk assessments related to psychosocial factors highlight the effect of an excessively demanding workload on the musculoskeletal system and physical recovery from it, especially in older workers.

Siun sote became aware of the large number of absences due to sickness in a collaborative venture with a pension provider. In 2019, the number of days taken off for being unfit to work was around 152,000, and in 2020 it was around 135,500. Musculoskeletal disorders accounted for 32% of the diagnosed absences in 2020, mostly due to back-, joint- and soft tissue-related illnesses.

Aims

The organisation aims to provide employees with an adaptable ergonomics model that emphasises prevention through training and raising awareness.

What was done and how?

Siun sote has created a comprehensive ergonomics expertise action plan for care and support work by establishing an ergonomics work group responsible for strategic planning and ways to improve ergonomics management.

The organisation now has its own 18 professional Ergonomic Card trainers who train staff to qualify for an Ergonomics Card (Licentiate of Health Science) and Siun sote's own Ergopass. It runs refresher training courses and supervises networking. Those with the Ergonomics Card qualification are network members, providing heads of units and colleagues with support and promoting ergonomics in their own unit.

- Those with the Ergopass qualification employ dynamic, ergonomic approaches to working with patients or clients on a day-to-day basis. The target is for 2,000 care and support work personnel to obtain the pass (the course includes theory, an approved

examination, practical training in one's own unit and conducting weekly bedside training sessions in the units).

- Those responsible for the units promote ergonomics in routine, everyday work and participate in the activities of the network (one to two such people per unit for specialist and primary care departments, housing service units and home care by area).
- The model includes the responsibility of the head of the unit as enabler, safety manager and driver of the approach. In addition to increasing the number of employees' working days, the model aims to support the elderly to remain in their homes, and to promote and maintain functional ability in the context of different types of housing.
- Based on the risk assessments, there are training sessions in ergonomics for specific units and practical guidance work in critical situations or functions. The training facilitator is an occupational healthcare physiotherapist or the unit's ergonomics trainer. Other measures include ergonomic workplace studies by the occupational physiotherapist, acquisition of appropriate tools in adequate quantities and familiarisation with their use.
- Measures related to excessive workloads include efficient shift work planning, maintenance of adequate resources, strengthening expertise and an even distribution of tasks in work shifts.

What was achieved?

Siun sote's model has a clear structure and the targets for improved ergonomics cut across all the operational areas. The role of those responsible for ergonomics in the work units has grown in importance and the entire network promotes continuous dissemination of knowledge in ergonomics and ensures that it is regularly updated.

- The comprehensive ergonomics model has led to a clear reduction in sick leave, by 11% in 2020 and 4.5% in 2021. Absenteeism due to inability to work fell to 20 days per person/year from 22 days in 2019.



Source: Antti Pitkälä / Siun Sote

- The robust, hands-on training model has provided support within the units. Training takes place in a real work environment during breaks as it is not possible to provide training on this scale by taking employees out of their unit.
- Expertise has increased and operating practices have been harmonised in care and support work in such tasks as handling and moving and using aids. There have been improvements in the ability to assess and control stress at work and to predict threatening situations.

Success factors

- Strategic control of the entire system and management support: setting up an ergonomics work group for care and support work, drawing up an action plan and its approval by the cooperating bodies, and a multi-level ergonomics expertise management model.
- Close cooperation with the operational side and service divisions: the creation of networks covering areas on every level, ensuring multi-professional involvement, and prioritising and ensuring progress with the divisions.
- Dynamic, motivated actors on all levels, according to their roles and responsibilities: financing and resources, justification for the new operating model, creating in-house training material and platform for the Ergopass, monitoring expertise and skills, maintenance of the system and support for the network.



Transferability

This ergonomics model is transferable to other organisations in the health and social care sector. It could also be adapted in scale and context for use in other industry sectors.

Costs and benefits

The direct costs of absence owing to inability to work fell by almost €6 million in 2020. The indirect costs are greater (filling in for absent personnel, substitutions, occupational

healthcare, prolonged inability to work, increased pension liability).

It is hard to assess the benefit that less absence has for personnel in managing the work and a unit, or for the patient or client receiving a service, but it seems to have been significant. Furthermore, there are challenges regarding staff availability in the local areas that Siun sote covers. Each day that someone is fit for work is significant for being able to cope and continue working, and it is a positive factor for recruitment.

In the annual wellbeing-at-work survey, the ergonomics model is listed as a factor of positive improvement (through better recovery from workday stress, a reduction in threatening situations).

Key features of good practice example

- Siun sote's ergonomics model has a strong emphasis on prevention through training and awareness raising.
- It is a systematic approach that includes an organisational-level ergonomics work group, Ergopass qualification, in-house ergonomics trainers and ergonomics delegates.
- It provides options for the different work units within the organisation to customise measures to their own specific needs.
- It has regular status checks.
- It involves all parties in the workplace and shows lasting benefits.
- The measures taken are strategic and well implemented in practice and have successfully decreased the number of sick days.

Further information

Further information can be found at
<https://www.siunsote.fi>
<https://www.siunsote.fi/en/web/english>

Siun sote's ergonomics model has a strong emphasis on prevention through training and awareness raising.

Applying participatory ergonomics to improve the safety of textile maintenance workers

COMMENDED

Zegna Baruffa Lane Borgosesia SpA

Italy

www.baruffa.com



Background

Zegna Baruffa Lane Borgosesia SpA produces high-end yarns for knitwear, all made exclusively in Italy.

Maintenance technicians in the factory work on many types of machinery, under different environmental conditions and often as needed. The tasks are diverse and unpredictable. Consequently, the physical load is also unpredictable and uncertain. The type of physical effort required involves a significant biomechanical load, both for the postures assumed and for the type of movements, as well as for the weight moved and the force required. As a result, the risk of developing MSDs increases.

The variability and complexity of the work tasks performed also means that it is difficult to measure the biomechanical risks that the maintenance workers are exposed to. In addition, it is difficult to apply standard ergonomic risk assessment methods to very variable tasks. The lack of

knowledge of the exposure to risk can contribute to the persistence of hazardous situations, or lead to an underestimation of the risk by safety personnel, or by maintenance personnel themselves.

The ergonomics training of maintenance technicians combined with the experience gained over time is essential to safely perform work activities. Traditional ergonomic risk assessment, effectively conducted on production lines, offers only approximate results when it comes to maintenance activities. A different approach with further analysis is required to fully consider the diversity of tasks and specific operating conditions in maintenance work.

Risk prevention therefore requires a participatory ergonomics approach with the direct involvement of maintenance workers to use their knowledge and experience, to identify risks and to make decisions on solutions.

Aims

The company aims to conduct a participatory ergonomics intervention to improve the safety of maintenance workers and to prevent MSDs.

What was done and how?

To improve the safety of 40 maintenance workers for its industrial plants and machines and to prevent work-related MSDs, the yarn company sought the assistance of ICS Maugeri, an external organisation that specialises in occupational medicine. Participatory ergonomics was implemented, involving workers throughout the whole risk reduction process.

A 6-month participatory ergonomics intervention was carried out by the head of the company's prevention and safety service, with the supervision of an external specialised ergonomist.

The maintenance workers were involved in the following two phases:

- **Phase 1:** ergonomics training dedicated to the principles of biomechanics, posture, load handling, environment and workspaces.
- **Phase 2:** identification of workstation risks through key questions and simplified assessment that led to an initial classification of the type of risk.

Next, the ergonomist directly observed the most critical activities carried out by the maintenance technicians, collecting information and reconstructing their impact on a representative work year. This was done to quantify the risk of exposure with greater precision and to identify the need for intervention.

Finally, the relevant ergonomic aspects were discussed with the maintenance team and the head of the prevention and safety service. Possible solutions were identified and their feasibility discussed. Both urgent and longer-term actions were set.

The following preventive measures were implemented:

- Modify spaces or rearrange work areas, for example, some steps were replaced with a fixed walkway.
- New or modified equipment was introduced. For example, hydraulic aids and lifters, bespoke manual trolleys: a trolley especially shaped to handle packing machine cylinders, a specially shaped trolley for printing machine cylinders, and a trolley with a height-adjustable platform to reach machine motors that have to be dismantled.
- Changes in work organisation were implemented.



What was achieved?

The participatory ergonomics intervention made it possible to:

- obtain a more precise profile of the risk exposure of maintenance workers for 11 production sectors;
- identify the criticalities of the specific workstations that require an urgent or short-term intervention;
- reach a shared agreement between the employees and the company regarding the improvement interventions to be implemented;
- determine what impact the ergonomic interventions had on the calculated risk levels of the tasks, eliminating exposure to high levels of risk and increasing the availability of aids to facilitate the most demanding tasks;
- increase employees' sense of responsibility towards health and safety in the workplace, laying the foundation for a fruitful collaboration with the company's safety and prevention service;
- increase the ergonomic knowledge acquired by maintenance workers, which they can then pass on to new colleagues;
- create a database of recurring failures, machine downtime and specific criticalities, all useful in better organising maintenance activities;
- codify the know-how of expert maintenance technicians that constitutes important information

both for safety and for the effectiveness of maintenance interventions;

- increase the efficiency of the maintenance technicians' intervention, thanks to the supply of aids; and
- contain an injury rate for maintenance workers equal to 0.

Furthermore, at the end of the intervention, the maintenance workers expressed their desire and intention to continue participating in further ergonomics training. With the intervention of a dedicated physiotherapist, the company responded to this request by organising a course on maintaining wellbeing and health through correct postures and targeted physical exercises.

Success factors

Success factors included:

- the use of external expertise to help with a specific complex problem; and
- training workers so that they could be fully involved in the process, and involving them in all stages of the systematic intervention process.



Transferability

A participatory ergonomics approach could be transferred to other companies but could also be transferable to organisations in other industries.

Costs and benefits

Costs:

The intervention costs (external ergonomist and cost of aids and implemented modifications) did not exceed the company's annual budget dedicated to prevention and safety.

- Aids (€4,500)
- Intervention of consultant for staff training and collaboration with specialised ergonomist (€60,000)

Benefits:

- **Perception of safety and working climate in maintenance workers:** Satisfaction of maintenance workers for the attention paid to their activity and for the actual interest on the part of the company. The working climate has benefited from this, with an increase in the level of safety also perceived by line workers, and a greater willingness of maintenance workers to expose specific problems and discuss possible solutions with the company.
- **Way of understanding the maintenance activity within the company:** The active participation of maintenance technicians in the risk identification and assessment process has sparked an innovative way of understanding the maintenance activity within the company.
- **Reporting of malfunctions and creation of a fault database:** The direct involvement of maintenance technicians in the timely reporting of malfunctions is a prerequisite for the creation of a company database on recurring failures of different types of machinery. This will allow the planning of preventive maintenance more effectively and notifying maintenance workers of particular types of interventions.
- **Transmission of knowledge to maintenance technicians in training:** The ergonomics training of the most experienced maintenance technicians indirectly improves their ability to transmit relevant information and know-how to the new maintenance technicians in training. This avoids the loss of an important repository of knowledge that is useful for properly running the machines.
- **Reduction of downtime due to breakdowns and malfunctions:** Thanks to the aids provided, the repairs carried out by the maintenance technicians are faster and more efficient. An average reduction of 10% in machine downtime (and therefore in loss of production) has been recorded.

- **Zero accidents for maintenance personnel:** The intervention contributed to maintaining an injury rate of 0 in maintenance personnel (registration during the period 2018-2021).

Key features of good practice example

- Carrying out participatory ergonomics by involving all workers throughout the entire intervention to better assess ergonomic risks and to identify ergonomic solutions in reducing these risks.
- Extensive involvement of a broad range of stakeholders (workers, employer, workers' representative for prevention and safety, external ergonomist) in improving the safety of workers and preventing MSDs.
- The results of the assessments were also summarised to create a tool to better assess workers' capability in carrying out the different tasks.

Further information

Further information can be found at
<https://www.baruffa.com/en/>

Worker participation resulted in practical solutions and a database of maintenance incidents that enables better organisation of maintenance activities.

Reducing physically demanding work with technical and organisational adjustments in cleaning services

COMMENDED

Hago Next

The Netherlands

<https://hago.nl/next>



Background

Hago Next is a Dutch company that provides both indoor and outdoor cleaning services at offices, schools, hotels, recreational facilities and events. The company employs about 450 cleaning staff.

Cleaning work is physically demanding, involving repetitive movements, maintaining a static posture for a long period of time, and heavy physical loads that can lead to OSH risks. Such work often hinders keeping experienced staff employable and can lead to high levels of sick leave and absenteeism. These risks are even higher as workers get older. Therefore, it is not only a challenge to retain experienced employees, but also difficult to attract new recruits.

Aims

The company aims to increase sustainable employability of its workers by improving work methods and conditions to reduce physical strain and prevent musculoskeletal disorders.

What was done and how?

The company manages safety and health risks to workers in a systematic way through technical, organisational and individual measures.

The organisation carried out a wide range of measures to reduce physical loads and to improve working conditions according to the hierarchy of controls (TOP-strategy in Dutch).

Technical measures include:

- Tools to make the work lighter
- 'Smart Hygiene' technology allows cleaning on the basis of data, so cleaners can focus on what and where to clean, leading to more efficient cleaning and enabling cleaners to vary tasks, thus reducing workload

Organisational measures include:

- Tools to make the work lighter
- Training coaches in ergonomics (ergocoaches) to develop tailor-made e-learning and to provide coaching in ergonomic work methods to individuals
- In cooperation with a centre for physical labour, all physically demanding activities, such as vacuuming, reaching when cleaning desks, pulling or pushing carts of wastepaper, and bending down to clean toilets, were inventoried and mapped to develop the training and e-learning

Individual measures include:

- The trained ergonomics coaches work with employees on location, teaching them techniques to reduce physical load
- Monthly e-learning sessions raise awareness of an issue across the organisation

Other specific changes to improve productivity and prevent OSH risks in the workplace include the following:

Working with clients to introduce adaptations at client premises:

- Barriers removed at customer sites near workstations
- Fewer waste bins (one per department instead of every desk)

Choosing ergonomic options when new equipment is purchased:

- Attachment for Hoover hose
- Back hoover instead of ordinary hoover
- Longer handle for the mop
- Handle for the feather duster
- Hotel sweeper introduced
- Interior mop introduced

Organisational changes:

- Rotating tasks among employees (for example, to avoid vacuuming for two hours without a break)
- Rotating tasks throughout the day

- Assisting each other with heavy tasks (for example, two workers move the scrubber together, instead of one person doing it alone)

Changes in individual working methods:

- Working with two hands instead of one
- Reaching out when working instead of stretching
- Reclining when working low
- Avoiding extreme/end position in the joint, for example, pushing a work trolley rather than pulling it

What was achieved?



Results of the intervention can be seen in terms of individual, social and economic aspects:

- Reduced health complaints
- Increased productivity through the use of less physical effort, ergonomic equipment and smart work organisation
- Working closely with occupational coaches and ergonomists, employees have the opportunity to voice their complaints, ideas, initiatives and improvement proposals
- Improved company reputation, notable in contract awards and an advantage in the tight labour market
- Reduced absenteeism and lower staff turnover

Success factors

- The company's commitment to improving OSH and keeping employees fit to work.
- A systematic approach to OSH based on a hierarchy of prevention.
- On-site training for employees with ergonomic coaches.
- Liaising with clients to reduce risks at their premises.



Transferability

This entire approach could be adopted by similar organisations that provide cleaning services. Certain components of the intervention, such as ergonomics training, rotation of tasks and improving equipment could easily be adapted by a wide variety of organisations in different sectors.

Costs and benefits

The investments are manageable and the organisation is convinced that it is well worth the investment.

- Hago Next has incurred additional costs for training, ICT and materials. Part of the occupational costs were covered in 2019 and 2020 by subsidies and contributions from the health insurer.

The benefits of the approach are more difficult to quantify. Positive effects can be expected on absenteeism, productivity and turnover.

- Productivity gains through the use of less physically taxing work methods, supported by ergonomic materials and through smart organisation.
- Reduction in work-related absenteeism due to physically less stressful work methods and ergonomic aids.
- Reduced staff turnover as a result of good working conditions and coaching

Key features of good practice example

Carrying out participatory ergonomics by involving all The company's multifaceted approach includes the following:

- introducing ICT to help organise work tasks;
- working with ergonomists to develop training programmes and customised e-learning;
- selecting and purchasing equipment to reduce workloads;
- on-site training for improved work methods;
- organisational changes, such as rotation of work tasks; and
- adapting client premises to improve workflow.

Further information

Further information can be found at <https://www.hago.nl/next>

<https://www.hago.nl/next/smart-hygiene>
(video on Smart Hygiene)

The organisation carried out a wide range of measures to reduce physical loads and improve working conditions.

Automating the stacking of crates and boxes to reduce manual lifting in a vegetable growing company

COMMENDED

Verdonk Broccoli

The Netherlands

www.verdonkbroccoli.nl



Background

Verdonk Broccoli is a vegetable growing company that produces over 3 million kg of broccoli per year. Verdonk Broccoli has 4 permanent and up to 35 seasonal employees who participate in harvesting and processing.

The process begins with planting in the spring, followed by crop work, harvesting (cutting) in summer/autumn, storage in the cold store, processing on the sorting line and preparation for transport.

Verdonk Broccoli is a family business that values sustainability and quality. This is demonstrated by their 'On the way to planet proof' quality mark and their Global Good Agricultural Practices (G.A.P.) certification. They also work with GRASP, an addition to the Global G.A.P. certification. GRASP stands for risk assessment based on social practice.

This system was specifically developed to assess agricultural companies on how they manage their employees. This

includes aspects such as health, safety and welfare. In practical terms, for Verdonk Broccoli this means, among other things: openness, decent working conditions, opportunities for quality training, good housing and safe working conditions.

Over the years, the company has invested heavily in trying to reduce physical effort and awkward postures when carrying out work tasks to avoid workers developing MSDs, focusing on eliminating risks at source.

One physically demanding task was in the packing area that involved lifting the crates and boxes of broccoli above shoulder height.

Aims

The aim is to prevent MSDs and reduce physical strain for employees, especially while stacking crates.

What was done and how?

Verdonk Broccoli deems it important for employees to like their work. For this reason, in recent years there has been an increasing focus on reducing physical strain. It has an up-to-date Risk Assessment Evaluation (RIE). A Stigas prevention advisor visits every four years to run through the RIE and give advice on measures and actions. Stigas is a Dutch non-profit organisation that provides risk/safety assessment for the agricultural sector.

The following technical measures were undertaken using the control hierarchy, starting with technical measures to eliminate risks. Central to the approach is the automation of crate lifting.

- When harvesting, employees can easily place the broccoli on the harvesting belt. The broccoli is packed (sealed) fully automatically. Furthermore, platforms are available so that employees can work on the conveyor belt at the right height. However, a problem remained with the stacking process, where the crates and boxes must be stacked on a pallet before they go onto the truck.
- To fill the trucks optimally, high stacking is required. This means that crates and boxes of broccoli have to be lifted above shoulder height. Palletisers were purchased in mid-2020 for lifting the crates and boxes. This eliminates the need for lifting above shoulder height. It also makes the work more efficient.
- When the machines were purchased, there was close consultation with the employee responsible for their maintenance.
- After consultation with the employees, it was decided that the packing speed should not be increased, even though this was technically possible, to avoid worker stress.
- All workers were trained and received instructions on good working posture.

A suitable solution still has to be found for folding crates that are delivered far above shoulder height and cannot be stacked with a forklift truck or other tool. The company that delivers these crates refuses to deliver them on two pallets with half-high stacks, instead of one high stack.

What was achieved?

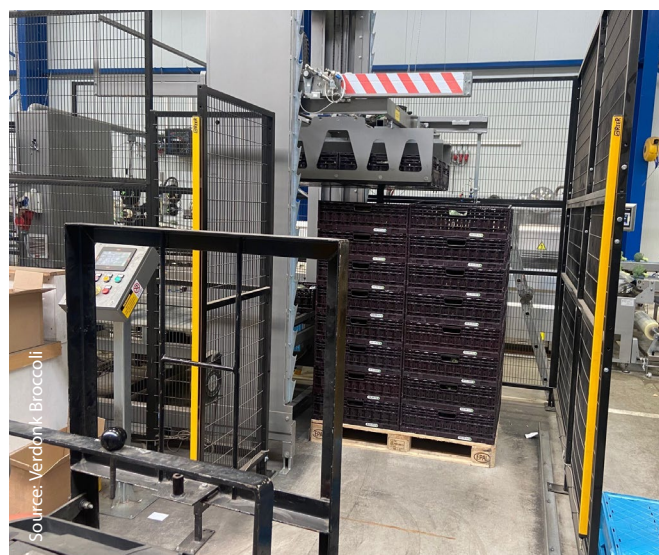
- Introducing the palletisers has reduced physical strain for employees, leading to fewer health complaints and absences, and a 30% reduction in staff turnover.
- Employees are more satisfied and motivated.



- There are efficiency savings for the company, as employees no longer have to spend the whole day stacking crates

Success factors

- The problem was tackled at source, as the palletisers remove the need for workers to lift above shoulder height.
- The company is committed to worker safety and health and uses a systematic approach to preventing risks.
- The company consults all affected workers, including maintenance, and takes account of work stress when making changes.
- The company showed leadership and a clear commitment to prevention.



Transferability

The approach could easily be adopted by other organisations in the agricultural sector, as well as industries in other sectors that require lifting and stacking crates. However, the initial investment to purchase equipment could be high for small enterprises.

Costs and benefits

The cost of €43,740 for the palletisers can be justified in terms of the OSH benefits for employees who would normally spend the whole day stacking, as well as saving costs for absenteeism, replacement workers, possible injury claims and increases in premiums

Key features of good practice example

- The company's cultural and systematic commitment to OSH and employees
- Regular risk assessment evaluations carried out by external professionals
- Tackling issues at the source

Further information

Further information can be found at <https://verdonkbroccoli.nl>

References and resources

<https://www.youtube.com/watch?v=MPDbhVjzP18>
https://www.youtube.com/watch?v=pGAK_qlCSmA

Introducing the palletisers has reduced physical strain for employees, leading to fewer health complaints and absences, and a 30% reduction in staff turnover.

GETTING IN TOUCH WITH THE EU

In person

All over the European Union there are hundreds of Europe Direct information centres. You can find the address of the centre nearest you at: https://european-union.europa.eu/contact-eu_en

On the phone or by email

Europe Direct is a service that answers your questions about the European Union. You can contact this service:

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- at the following standard number: +32 22999696 or
- by email via: https://europa.eu/european-union/contact_en

FINDING INFORMATION ABOUT THE EU

Online

Information about the European Union in all the official languages of the EU is available on the Europa website at: https://europa.eu/european-union/index_en

EU publications

You can download or order free and priced EU publications at: <https://op.europa.eu/en/publications>. Multiple copies of free publications may be obtained by contacting Europe Direct or your local information centre (see https://europa.eu/european-union/contact_en).

EU law and related documents

For access to legal information from the EU, including all EU law since 1952 in all the official language versions, go to EUR-Lex at: <http://eur-lex.europa.eu>

Open data from the EU

The EU Open Data Portal (<http://data.europa.eu/euodp/en>) provides access to datasets from the EU. Data can be downloaded and reused for free, for both commercial and non-commercial purposes.

The **European Agency for Safety and Health at Work (EU-OSHA)** contributes to making Europe a safer, healthier and more productive place to work. Set up by the European Union in 1994 and based in Bilbao, Spain, the Agency researches, develops and distributes reliable, balanced and impartial safety and health information, networking with organisations across Europe to improve working conditions.

EU-OSHA also runs **Healthy Workplaces Campaigns**, backed by the EU institutions and the European social partners, and coordinated at national level by the Agency's network of focal points. The 2020-22 campaign, Healthy Workplaces Lighten the Load, aims to raise awareness of work-related MSDs and the need to manage them and to promote a culture of risk prevention.

European Agency for Safety and Health at Work

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