



**World
Physiotherapy**
Europe region

Booklet –

Management of MSDs at Work

Musculoskeletal Disorders Working Group (MSDs WG)

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INTRODUCTION

Musculoskeletal disorders are common health conditions, often affecting the lower back, the neck and the shoulder. These disorders have a great cost to individuals and society through the associated disabilities, as well as healthcare needs. Being multifactorial, they comprise a complex relationship between factors related to work, related to the organisational or psychosocial context of work, and related to the worker.

We are delighted to produce this e-booklet for people in the telework workforce. It is made up of practical examples of common painful conditions that can reduce employees' productivity at work and in their home lives. It offers straightforward solutions to these situations.

1. REAL STORY

Margarita is 25 years old. She is married, has a wonderful family, and has a daughter. Also, she works as a teacher at a kindergarten in Bulgaria.

After giving birth, her daily life began to be more related to housework and raising her daughter.

She had no time for sports or exercise.

Two months after she returned to work, and combined with the increased workload at home, she began to feel back pain between her shoulder blades.

Because of that, she works with the youngest children at the kindergarten, she is forced to bend down many times.

The workload continues at home, where she takes care of her daughter.

For six months, the pain hasn't gone away after being treated with drugs.

After 6 months, she was sent to the specialised Orthopedic hospital in Sofia. The orthopedist found mild to moderate double "S"-shaped scoliosis. He recommended that she should consult a physiotherapist for the appointment to give her a specific individual program for her case. The physiotherapist performed the necessary clinical tests.

Then, weak abdominal muscles and back muscle testing were associated with the pain. The physiotherapist conducted training in correct posture.

He made a program of exercises, adapting it to Margarita's problems: pain, distortion, work and daily life.

Margarita went home and started doing the exercises for about 10 minutes every day. She met with the physiotherapist two more times - about every two months—and he changed and adapted exercises for her case, then included exercises with an elastic band so she could do them anywhere.

After the third month, the pain disappeared.

Margarita continues to devote 10 minutes a day to her exercises.

2. CASE 1

This is a 33-year-old woman, a mother of two children, who moved to work from home during the pandemic. The pain began in the neck and thoracic region. An MRI scan reported no significant pathology, and this has upset her. She has now been referred for physiotherapy. She is stressed from her heavy workload and additional household commitments. This has led to poor work performance. She used to do yoga.

2.1 Challenges

- She has a painful neck and upper back.
- She works from the kitchen table, promoting poor posture.
- No dedicated workplace is provided.
- Along with her work, she also has to take care of her children.
- There is a problem with her work-life balance and management of her time.
- The management of the company does not understand the complexity of working outside the normal office and the need for physical activity.

2.2 Risk if managed poorly

- She will present with a reduced range of motion and muscle strength in the neck, upper back and shoulders.
- She may also exhibit stress and anxiety.
- Left untreated, this may result in significant functional and psychological issues that will impact her emotionally.

2.3 Proposed solutions (Take-home messages)

- This is an ideal case for Physiotherapy assessment and treatment.
- The involvement of an ergonomics team, assessing and organising her workstation, and training her for the new work environment, would set her up comfortably and reduce some of her stress.
- Creating a balance of work with active breaks where exercises are performed, would facilitate being more active during the day.
- It would be logical to discuss hybrid working for this employee with her manager.
- Improving the social environment, especially with a focused activity, would help her stress levels as well. This could be created with group online activities. For example, attending an online clinical Pilates or a physiotherapy-led Yoga class.
- Learning time management skills such as meal planning and preparation over the weekend would assist her work-life balance.

3. CASE 2

This is a 55-year-old male teleworker in an ambulance center, with chronic left shoulder pain. He has had intermittent symptoms for the last 2 years. When it is severe, the pain can disturb his sleep and restrict his movement. During these times, he finds taking off his sweater as painful as putting on his seat belt. He also reports that the pain comes on when he is at his desk, especially when using the phone and inputting data onto the screen. Work is stressful as he is listening to anxious people in difficult situations. He is very concerned that the pain will come back and that he will have to go on sick leave.

He has had an ergonomic assessment at work. Recently, he went to his doctor and was referred for an MRI scan. This showed 'age-related changes in the subacromial space, with slight impingement of the rotator cuff'. He was prescribed painkillers, anti-inflammatory medications and anti-inflammatory gel. The doctor referred him to the local physiotherapy clinic.

3.1 Challenges

- Long shifts in a stressful environment.
- Intermittent pain.
- Sleep disturbance.
- Does not understand why he has shoulder pain.

3.2 Risk if managed poorly

- He may be ill-tempered on the phone as he is in pain.
- He may look for another type of job
- He will end up with a surgical consult.

3.3 Proposed solution

The approach of the physiotherapist has been twofold. Direct Physiotherapy treatment to help the symptoms settle down and advice on how to help himself.

3.4 Direct physiotherapy

- Explanation of why he has pain, relating it to the MRI results.
- Deep tissue massage and Dry Needling to release the tight neck and shoulder muscles
- Postural awareness:
 - Advise on keeping the right shoulder down, level and back in order to reduce impingement of the rotator cuff, especially during stressful times.

- An explanation about how his neck position, when he is on the phone and working at the computer, can cause pain, and advice on how to adjust his position in order to keep the strain off the muscles between the neck and shoulders.
- Advice to avoid prolonged positions, especially at work: desk-based exercises will help that.
- Advice on sleeping positions and pillows, to get his neck and shoulder in a comfortable position
- Advice on posture while off duty, e.g., watching TV or driving.
- Instruction on an exercise program to encourage movement of the shoulder and neck.
- Exercise 'snacks' are exercises that he can perform while on duty, to keep his muscles moving.
- Gradual progression of the program to include stretches to keep the neck and chest muscles flexible.

3.5 Instructions from Physiotherapists for self-help, included

- Instructions on the use of ice and the anti-inflammatory gel to ease the pain.
- Breathing exercises to reduce stress, which can increase the tone in the muscles, aggravating the pain
- Emphasis on the importance of maintaining his exercise program for his shoulder and advice on the benefits of general exercise outside of work.

This double approach has been helpful, and he has less pain now, which he can deal with himself if it flares up. He may need to go back to the Physiotherapist occasionally if he can't control a bad episode.

4. CASE 3

A lawyer reports a gradual onset of back pain over the last year. His MRI scan showed 'nothing' which has frustrated him. He works very long hours, is highly stressed, sleeps poorly, and has not been able to exercise or eat well in the last 6 months, and has gained 8kg. His partner is worried about his sleeplessness, his stress and his weight issues. He has bought a very expensive chair to help him sit properly, but the pain is marginally worse when he sits in it.

4.1 Challenges

- He believes that there must be a structural cause of the pain and that the healthcare system has not found it.
- He does not think work stress relates to pain.
- He does not feel he can control work stress.
- He agrees sleep is essential but struggles to sleep well despite efforts.
- He can afford to attend physiotherapy, but has no time.

4.2 Risks if managed poorly

- There is a risk of chronic back pain if various lifestyle risk factors are not addressed.
- Other general health issues may arise (e.g., cardiovascular disease or mental health) if lifestyle is not addressed.
- He may seek further self-paid options for diagnostics and treatment (e.g., further imaging, medication, or unauthorised health providers).

4.3 Proposed solutions

- Needs to alter lifestyle to aid work-life balance; discussion with a Physiotherapist would help this.
- He may need to negotiate roles and responsibilities with his employer.
- He must find a way to incorporate activity into his life (at work or home).
- He could consider the activity a stress relief to help relieve pain and sleep.
- Pain pathology must be explained to him, especially the 'non-structural' causes of pain.
- He needs to consider time management to get exercise into his day.
- Online Physiotherapy would address many of these issues
- Face-to-face physiotherapy would help him with his back pain and could teach him relaxation exercises. He could do these at his desk to reduce his stress level.

5. CASE 4

An employee who is a sedentary, middle-aged man develops low back pain. The pain worsens with prolonged sitting and working at his desk. He is now considering going on sick leave or working reduced hours. He had an MRI of his lower back, which showed 'disc degeneration'.

4.1 Challenges

- He wants to reduce his hours at work, but there is no gain for the employer in part-time employment.
- The job provides little variability and autonomy in structuring occupational tasks.
- He was told that exercise is the first-line treatment, but he thought that rest was the best thing for people with disc degeneration.
- There is no opportunity at work for physical activity, and there is limited availability in the community.
- Would like to attend manual therapy but think that it will be 'a miracle cure'.

4.2 Risks if managed poorly

- The employee does not achieve his work targets at work, although at his workstation.

- If the employer does not engage, a doctor may certify the employee on sick leave.
- This could become a chronic low back pain case, with catastrophising and fear-avoidance, and would need more complicated intervention.
- In this situation, there is the possibility that he would end up on long-term illness benefits, resulting in a financial loss for him.

4.3 Proposed solutions (take-home messages)

- Provide Physiotherapy education on disc degeneration, which is a common age-related change. Emphasise the fact that MRI changes don't always correlate with a patient's symptoms
- After Physiotherapy assessment, start appropriate back exercises and treatment if required.
- Establish liaison with the employer, with an emphasis on ergonomic assessment and structuring work tasks so as not to aggravate the pain and to avoid static or repetitive muscle work.
- Suggest to the employer that flexible starting times, remote work, and scheduling breaks might help this situation.
- Facilitate healthy physical activity at work (e.g., desk-based exercises, increasing his step count around the office, health technology, health campaigns and education, and walk-and-talk meetings).
- Invest in a health ambassador to do health screenings and implement a weekly exercise intervention during office hours to improve mental health.

4.4 The main messages are:

- 1) Not all back pain needs to be treated in the medical system: Exercise, education and ergonomic advice can prevent many painful conditions from occurring.
- 2) Employers can keep people physically healthy by making small changes.
- 3) Self-management and a healthy lifestyle can help reduce pain.
- 4) Ergonomic and postural advice should focus on the positives of what can be done to remedy the situation, rather than advising rest and caution.
- 5) An ongoing liaison between the healthcare provider and the employer is critical to maintaining people at work and returning employees to work after an injury.
- 6) Consideration may need to be given to psychological, social and multidisciplinary care in cases where the pain has become longstanding.

The benefits and disadvantages of expensive and sometimes inappropriate imaging, scans, and/or medication must be considered.

CONCLUSION KEY MESSAGE

Many of these examples show how a simple problem, where someone has pain at work, can escalate into a life-changing situation. In some instances, the person may have to leave their job due to the pain, or may have become psychologically affected by the pain if it is left unchecked.

The solutions may be simple, as we have described, but it takes cooperation from both the employer and employee to reach a good outcome for all.

Pain at work can reduce the quality of life and lead to worker absences and economic losses for the company. If the necessary measures were taken quickly, the situation would be easier and faster to control. Physiotherapists are trained to deal with pain and can give knowledgeable advice to assist people caught up in these situations to get them back to leading a purposeful and happy life.

It is essential to stay active when you are working at a desk. Simple desk-based exercises really help.

These can be seen on our social media platforms.

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