WORKSAFE
Mahi Haumaru Aotearoa

Contributing factors for musculoskeletal risks checklist

A checklist to help businesses understand their work-related musculoskeletal risks.

What can this checklist help with?

There are many work-related risk factors that can contribute to worker discomfort, pain, and injury.

You can use the following checklist to better understand the broad range of musculoskeletal risk factors that may be present. This checklist may also be helpful if you have:

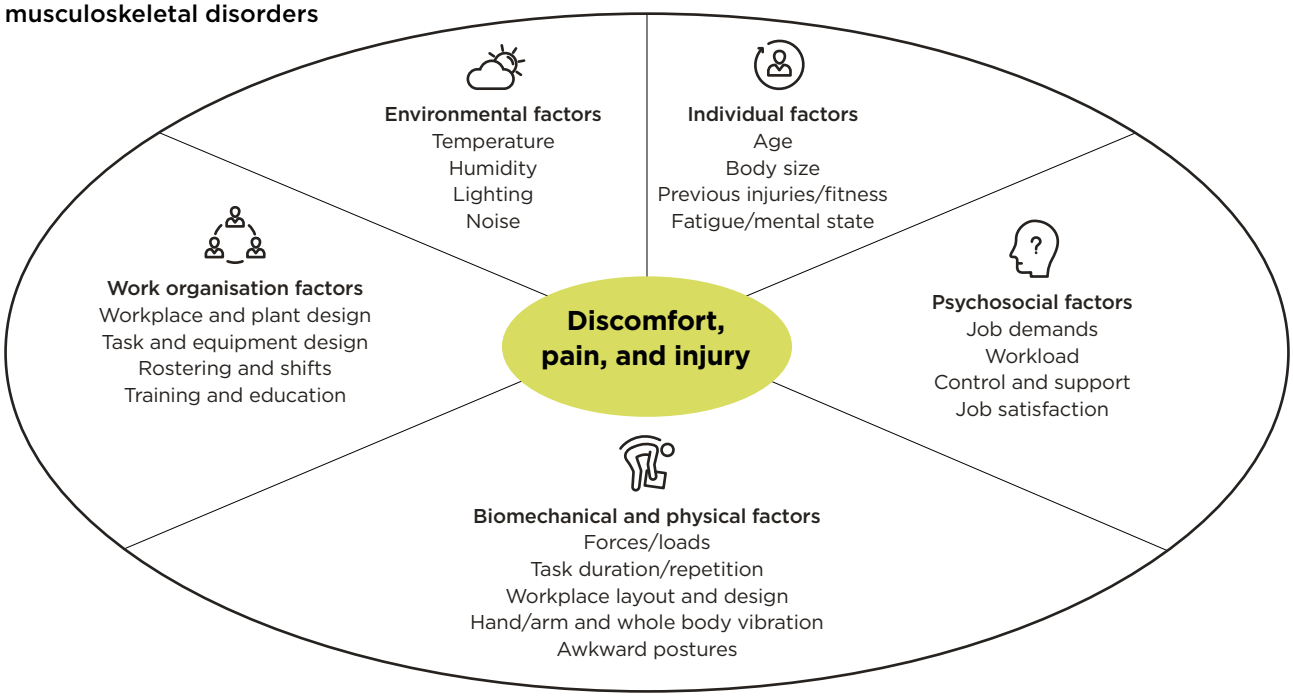
- completed the New Zealand Manual Handling Assessment Charts (NZMAC) or the HSE (UK) online MAC tool, the New Zealand Risk Assessment of Pushing and Pulling (NZRAPP) tool, or the New Zealand Assessment of Repetitive Tasks (NZART) tool and you want to look at some additional factors
- tasks that are not covered by NZMAC, NZRAPP, or NZART (for example, manual handling-while-seated, carrying on the shoulder, exposure to vibration, levering tasks)
- vulnerable workers.

The questions are ordered into these risk factor categories: biomechanical/physical, work organisation, environmental, psychosocial, and individual.

For more information about these risk factors, see: Quick guide: Work-related musculoskeletal disorders and risk factors

Use a separate checklist for each activity you want to investigate.

Contributing factors for work-related musculoskeletal disorders



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Involve your workers when managing work risks

You must involve your workers when identifying hazards/risks and making decisions about what control measures to use. Go through the checklist with the people carrying out the work.

Implementing controls

Businesses need to so far as is reasonably practicable, eliminate work-related risks. If a risk can't be eliminated, it must be minimised by implementing effective control measures. Use the hierarchy of controls to help work out the most effective control measures. Focus on controls higher up the hierarchy rather than relying on administrative controls such as training.

What should you do if you need help?

Depending on how complex the job or task you are looking at is, you may need to consult with a specialist such as an ergonomist/human factors professional.

The HASANZ Register is one way to find a qualified professional.

What happens after you decide what control measures to put in place?

Often people find an 'action plan' approach useful to keep track of what they need to do. For example:

TASK	RISK FACTORS	POTENTIAL HARM	CONTROL MEASURE(S)	WHO IS RESPONSIBLE?	DUE DATE	REVIEW DATE
Lifting 10kg boxes off a conveyor onto a pallet	Repetitive lifting and lowering to ankle height and at shoulder height, reaching to place boxes onto the back of the pallet, repetitive carrying of boxes, slipping on contaminated floor, tripping on the edge of the pallet	Musculoskeletal injury	Install vacuum lifter to transfer boxes from the conveyor onto the pallet along with an automated pallet lifter, rotator, and wrapper. Train workers how to use the equipment and revise safe operating procedures with workers. Monitor to ensure equipment is being used correctly, is well maintained, and monitor impact of residual risk to worker health.	Line 1 Manager	1 May 2025	1 October 2025

For more information on how to write health and safety documents see Writing for health and safety: guidance for workplace health and safety writers

Contributing factors for musculoskeletal risks checklist

1. Company/site information

Name/purpose of activity:
Location of activity:
Team/individuals involved:
What items are handled:
When does the task take place: (shift/time of day)

2. Biomechanical/physical risk factors

Forces/loads

Consider:

Are the loads handled unstable, unbalanced, or unpredictable? For example, they could move suddenly, or the contents could shift.	Yes	No
Are the loads harmful? For example, they are either sharp, hot, cold, contain hazardous material, or are potentially harmful.	Yes	No
Are the loads heavy, bulky, unwieldy, or hinder/block the worker's view when handling them (includes pushing or pulling tasks)?	Yes	No
Are the loads difficult to grasp? For example, greasy or oily, or the handles are not fit-for-purpose.	Yes	No
Are the hands, wrists, or fingers used repetitively to press buttons or objects, used as a hammer, or apply pressure in a trigger action?	Yes	No

If you have ticked 'yes' to any of the force or load risk factors being present, use this space to record additional comments or ideas to manage the risk:

Task duration/repetition

Are there activities that involve:

Lifting or lowering more than 12 lifts per minute or 1 lift every 5 seconds?	Yes	No
Carrying more than once every 12 seconds?	Yes	No
Standing, walking, or sitting for long periods of time?	Yes	No
Repetitive upper limb actions (of the shoulders, arms, hands, wrists, fingers), where the same movements occur every few seconds, or the fingers, hands, or wrists are used intensively?	Yes	No

If you have ticked 'yes' to any of the task duration or repetition risk factors being present, use this space to record additional comments or ideas to manage the risk:

Workplace layout, design, and awkward postures

Consider the workers' postures and how the workplace layout and design might influence how they work:

Are there large vertical movements (for example, from floor to reaching above shoulder height) or large horizontal movements (for example, reaching or holding loads away from the body)?	Yes	No
Does the handling occur while seated, particularly if it is above 3kg for women or 5kg for men, or outside the 'seated manual handling zone'?	Yes	No
Is there prolonged or repetitive work when squatting, kneeling, or crouching?	Yes	No

Do workers need to stoop, twist, or bend, or are their movements restricted due to equipment they use or need to work around?	Yes	No
When carrying loads are they held close to the body but carried for more than 10m without a rest?	Yes	No
Does the size of the load mean the load is held away from the body?	Yes	No
Are loads carried on the shoulder for more than 20m without rest?	Yes	No
Are loads pushed or pulled without a rest for more than 20m?	Yes	No
Are there any team lifting or handling tasks? The risk increases the more people involved.	Yes	No
Are there repeated awkward upper limb postures, or are there static postures which are held for more than two consecutive hours per day?	Yes	No

Consider if the tools or equipment used are fit for purpose? For example:

- suitable for both left and right-handed use
- a suitable size so they can be gripped easily
- suits the physical attributes of your workforce.

If you have ticked 'yes' to any of the workplace layout, design, or awkward postures risk factors being present, use this space to record additional comments or ideas to manage the risk:

Hand-arm and whole body vibration

Do workers use hand tools that could expose them to hand-arm vibration?	Yes	No
Do workers operate vehicles or equipment that exposes them to whole body vibration?	Yes	No

For more information about vibration see Vibration

You may also want to consider completing a more detailed vibration assessment. For example, using the Health and Safety Executive (UK) Hand-arm vibration calculator

If you have ticked 'yes' to any of the vibration risk factors being present, use this space to record additional comments or ideas to manage the risk:

3. Work organisation risk factors

Workplace and plant design

Consider how the workplace or plant is designed:

Is the work rate imposed by a process?	Yes	No
Do workers handle loads on different levels or at height? For example, carrying up or down ramps, stairs, or ladders, or their postures are severely constrained due to workplace, plant/ equipment design.	Yes	No
Are floor surfaces where the work occurs in poor condition? For example, greasy, oily, wet, slippery, severely damaged, or unstable.	Yes	No
Are heavy loads pushed or pulled up or down ramps, or on tail lifts, or where gravity could make it more difficult to control the load and increase the risk of injury, falls, or entrapment?	Yes	No

If you have ticked 'yes' to any of the workplace or plant design risk factors being present, use this space to record additional comments or ideas to manage the risk:

Task and equipment design

As a business do you have pay incentives that affect how workers undertake the work? For example, 'job and done' type work or 'piece-rate' work, where workers are paid by the number of items they handle regardless of time? A good example of this is fruit picking, where workers are paid according to how much they pick.	Yes	No
Do the tasks require unusual strength, height, or other physical attributes to perform them?	Yes	No
Do workers work by themselves during the shift or for part of a shift, or for certain tasks?	Yes	No

You might also want to consider how your business:

- Consults with workers about how they do their job, how it is designed (for example, task organisation, job rotation), or on possible control measures, or the selection and trialling of new equipment.
- Maintains and accesses equipment for maintenance. For example, is equipment well-maintained, is it on a maintenance schedule, is the schedule followed?
- Addresses other types of risks that may affect how the work is undertaken. For example, chemicals, airborne risks, fatigue.

If you have ticked 'yes' to any of the task or equipment design risk factors being present, use this space to record additional comments or ideas to manage the risk:

Rostering and shifts

As a business:

Do you have shift work?	Yes	No
Are you often short staffed, or there are not enough workers to meet deadlines?	Yes	No

You might also want to consider how your business:

- plans the tasks and work
- schedules rest breaks to make sure there is sufficient rest and recovery for workers
- involves workers in how the work or rest breaks are planned.

For more information on shift work see Managing the risks of shift work

If you have ticked 'yes' to any of the rostering or shift risk factors being present, use this space to record additional comments or ideas to manage the risk:

Training and education

Do workers:

Require special information or training for the safe performance of a task?	Yes	No
Feel they have not been given enough training, education, and information to carry out their jobs safely and successfully?	Yes	No

For more information see Providing information, training, instruction or supervision for workers

If you have ticked 'yes' to any of the training or education risk factors being present, use this space to record additional comments or ideas to manage the risk:

Personal protective equipment (PPE)

Consider if workers need to wear PPE.

Are workers' movements or postures hindered by clothing or PPE?	Yes	No
Does wearing PPE increase fatigue or discomfort?	Yes	No
Is there an absence of the correct or suitable PPE available or worn?	Yes	No

For more information on PPE see Personal protective equipment (PPE)

If you have ticked 'yes' to any of the PPE risk factors being present, use this space to record additional comments or ideas to manage the risk:

4. Environmental risk factors

Thermal conditions

Consider the work environment and thermal conditions the work occurs in.

Is it very hot, or cold, or humid?	Yes	No
Does it change how the work is performed at different times of the year?	Yes	No

Workers must have access to clean drinking water. They should have opportunities to drink often to stay hydrated in hot and humid conditions and have access to toilets.

For more information see Temperature at work and Workplace and facilities requirements

If you have ticked 'yes' to any of the thermal conditions risk factors being present, use this space to record additional comments or ideas to manage the risk:

Physical environment

Consider the physical environment where the work occurs, for example, inside or outside.

Do handling tasks occur in strong winds or rain?	Yes	No
What is the lighting like? Is it too bright, dark, are there areas of high contrast, or sun strike?	Yes	No
Are there any distractions due to noise?	Yes	No

Does the use of noisy equipment make it difficult to communicate?	Yes	No
Is the air quality poor? For example, are dust or fumes present?	Yes	No

For more information see:
- Noise
- Dust
- Fumes
- Carcinogens and airborne risks

If you have ticked 'yes' to any of the physical environment risk factors being present, use this space to record additional comments or ideas to manage the risk:

5. Psychosocial risk factors

Workload and job demands

Are there sudden changes in workload, or seasonal changes in volume without mechanisms for dealing with the change?	Yes	No
Do workers often find it difficult to keep up with the work tasks?	Yes	No
Do workers often work rapidly to be able to take a longer break or skip breaks to finish early?	Yes	No

If you have ticked 'yes' to any of the workload or job demands risk factors being present, use this space to record additional comments or ideas to manage the risk:

Control, support, and communication

Do your workers feel:

They have little or no control over the work pace, how they do their job, or when they can take breaks?	Yes	No
They have a lack of support from either co-workers, or managers?	Yes	No
That overtime or shiftwork is poorly organised or managed?	Yes	No
There is a lack of communication or consultation on how the work is done, or a lack of involvement in the risk assessment and risk management process?	Yes	No
They cannot raise health or safety concerns with their manager. For example, English as a second language, they are being bullied at work?	Yes	No

If you have ticked 'yes' to any of the control, support, or communication risk factors being present, use this space to record additional comments or ideas to manage the risk:

Job satisfaction and role clarity

Talk to your workers to understand if they:

Are unsatisfied with their jobs and/or have poor work-life balance?	Yes	No
Have poor role clarity. For example, workers are unclear of their responsibilities and expectations.	Yes	No
Feel that their health, safety, and wellbeing are not viewed as important by the organisation?	Yes	No
Feel they have not been given sufficient training and information to carry out their job successfully?	Yes	No

For more information see Psychosocial factors

If you have ticked 'yes' to any of the job satisfaction or role clarity risk factors being present, use this space to record additional comments or ideas to manage the risk:

6. Individual risk factors

Vulnerable workers

Do you have workers that may be at significant risk or injury?
For example, workers who:

Are new mothers, or pregnant	Yes	No
Are young workers	Yes	No
Are older workers	Yes	No
Are new to the job or workforce	Yes	No
Have a disability	Yes	No
Have a significant health condition, injury, or are recovering from an injury	Yes	No

Consider if these workers require adjustments or modifications to be made to their work, equipment, or workstation design? If so, could these modifications support all workers?

If you have ticked 'yes' to any of the individual risk factors being present, use this space to record additional comments or ideas to manage the risk:

Body size

Consider anthropometry such as the size and individual characteristics of the workers. For example:

Are workers very small or very tall – can they easily reach shelves, or work at benches without bending over?	Yes	No
Do workers have small or large hands or feet, that means there is a poor fit when holding handles, operating levers or pedals, using hand tools, pressing buttons, or operating equipment?	Yes	No
Do workers need special equipment, clothing or PPE, or other workplace adjustments so they can do the work?	Yes	No
Do workers have enough space to perform the task easily or move between objects/ equipment?	Yes	No

If you have ticked 'yes' to any of the body size risk factors being present, use this space to record additional comments or ideas to manage the risk:

7. Notes

8. Declaration

Name:

Position:

Signature:

Date: DD / MM / YEAR