Move WELL Work WELL

SEPTEMBER 18-24, 2022

MSI SAFETY TALK TOOLKIT

Includes:
Leadership Key Messages for Safety Talks
MSI Risk Factor Safety Talks
Attendance Sheet

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LEADERSHIP TALK

Key Messages for Safety Talks

- **Move Well – Work Well Week** reminds us that when we move often and use good body mechanics, we reduce the risk of musculoskeletal injuries (MSI) and remain productive, comfortable and healthy at work and home. Essentially, when we move well, we work well.

- During **Move Well – Work Well Week**, set aside short bits of time each day to focus on the principals of MSI prevention. The series of safety talks will help workers identify MSI risk factors in their work and learn ways to control the risk through the implementation of ergonomics.

- Everyone in the workplace needs to understand how MSI prevention activities help to recognize, evaluate and control MSI risk factors and keep workers healthy and safe. MSI prevention principals can be applied to any situation where MSI risk factors exist.

- Remember to move often by alternating your tasks and taking microbreaks.

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MSI RISK FACTORS

Forceful Exertions

Forceful exertions describe the amount of effort exerted by muscles to complete a job or task.

A job may involve high amounts of force (a single action of lifting a heavy load) or a continuous build-up of force on the body over time (frequently lifting lighter loads). Without enough rest for muscles to recover, the soft tissues weaken over time.

Force is required to perform manual tasks like lifting, lowering, carrying, pushing, pulling, gripping, and manipulating loads.

Examples of forceful exertions:

- Lifting and supporting a client or animal.
- Lifting product on a packaging line.
- Manual order picking.
- Pushing and pulling carts.
- Loading and unloading trucks.
- Operating equipment overhead.
- Using a pry bar to move heavy objects.
- Moving trolleys in crammed spaces.
- Squeezing tin cutter pliers to cut sheet metal.

Risk of injury increases as:

- The amount of force required increases.
- The posture used gets more awkward.
- The number or speed of repetitions increases.
- The length of time the force is exerted between breaks increases.

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MSI RISK FACTORS

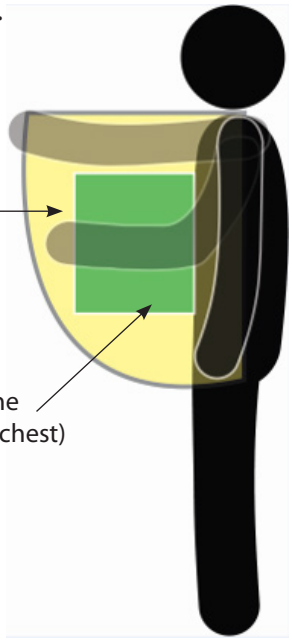
Forceful Exertions

Engineering controls

- Automate tasks or provide mechanical aids.
- Provide adjustable equipment and machinery (like a pallet lift or turn table).
- Raise work level to avoid lowering forces.
- Replace lifting, lowering and carrying actions with pushing and pulling.
- Design carts for pushing rather than pulling.
- Position materials to be lifted close to the body and between mid-thigh and mid-chest height.
- Design containers to reduce the effort required to lift and hold them.
- Suspend heavier hand tools from balancers or tool supports.
- Use lighter and better-fitting hand tools.
- Design work for a power grip rather than a pinch grip.

Administrative controls

- Implement job rotation and task variety to reduce exposure to forceful exertions.
- Provide rest breaks and microbreaks so muscles can recover.
- Establish a preventative maintenance schedule for equipment and tools.
- Instruct workers in the use of specific measures to control risk.
- Train workers in proper body mechanics and lifting techniques.



What can you do?

- Warm up before doing physically demanding work.
- Follow safe work practices and procedures.
  Use any mechanical aids that have been provided.
- Pace your work.
- Take smaller loads and make more frequent trips.
- Take frequent microbreaks and regular scheduled breaks.
- Alternate physical and non-physical tasks.
- Use proper body mechanics during manual handling activities.
- Report ergonomics-related concerns and any signs or symptoms of MSI.

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MSI RISK FACTORS

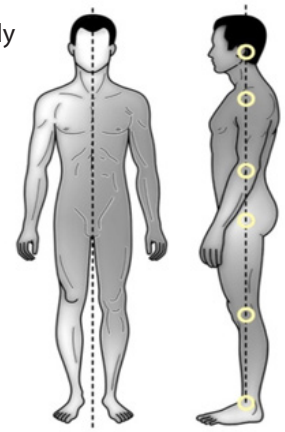
Awkward Postures

Awkward postures happen when a body part moves away from its neutral position. Activities that put a body part in an unnatural position force muscles, tendons and ligaments to work harder and increase pressure on spinal discs. Discomfort or pain develops and the posture becomes hard to maintain.

Examples of awkward postures:

- Reaching in front or to one side.
- Reaching overhead.
- Elevating shoulders.
- Twisting or bending your back, neck or wrist forward, backward or to one side.
- Kneeling, squatting or stooping.

Neutral body position or posture



Risk of injury increases when:

- A body part is out of neutral position.
- Muscles exert more force.
- The posture is repeated.
- The posture is held for long periods.

Engineering controls

- Design work stations and tasks to eliminate awkward postures.
- Provide height-adjustable work stations or platforms to raise and lower workers to appropriate heights.
- Use step stools or ladders to avoid overhead reaching.
- Organize workstations to prevent excessive reaching.
- Provide adjustable equipment and machinery (like pallet lifts, turn tables, and mobile scissor lift tables).
- Place frequently used materials between mid-thigh and shoulder height.
- Select tools and equipment that allow workers to work in neutral postures.
- Provide sufficient lighting to avoid bending forward to see work.

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MSI RISK FACTORS

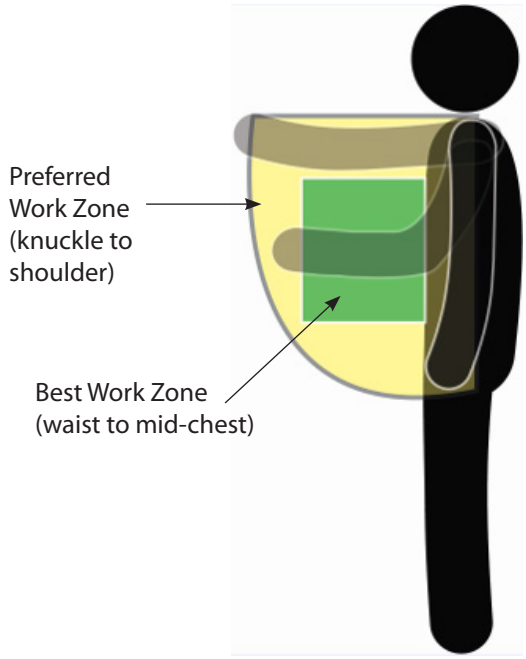
Awkward Postures

Administrative controls

- Change work schedules. Rotate jobs to limit how often a worker uses awkward postures.
- Give workers a variety of job tasks that incorporate multiple movements and healthy postures each shift.
- Provide rest breaks and microbreaks.
- Develop and implement written safe work practices and procedures.
- Train workers in safe work practices and procedures.

What can you do?

- Be aware of your posture. Maintain neutral posture as much as possible.
- Adjust work station to perform work at the appropriate height.
- Remove clutter or obstacles in your workstation. Keep frequently used materials within easy reach.
- Change positions and tasks frequently.
- If you must work in awkward postures, take frequent microbreaks and stretch affected body parts to reduce stiffness and muscle fatigue.
- Take your regular scheduled breaks.
- Follow safe work practices and procedures.
- Report any ergonomics-related concerns and signs or symptoms of MSI.



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MSI RISK FACTORS

Sustained Postures

Sustained postures refer to holding the body, or a body part, in the same position for an extended period. Even if your posture is neutral and the level of force is low, you may feel discomfort and pain if you stay in the same posture for too long.

Muscles must continuously contract in order to hold a fixed position. When muscles hold a fixed position, blood flow is reduced, muscles tire, and related soft tissues can become stressed.

Prolonged sitting and an inactive lifestyle are associated with many adverse health conditions.

Examples of sustained postures:

- Sitting for prolonged periods.
- Standing for prolonged periods.
- Raising arms to complete high-level or overhead work.
- Leaning over an assembly line for prolonged periods to work with product.
- Elevating shoulders to type.
- Using a computer mouse at a desk that is too high.
- Gripping a tool for prolonged periods.
- Stooping or crouching to complete low-level work.

Risk of injury increases as:

- The muscles have to exert higher levels of force.
- A body part moves farther away from its neutral position.
- The frequency of task increases.
- The length of time the posture is held increases.

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MSI RISK FACTORS

Sustained Postures

Engineering controls

- Provide easily adjustable work stations designed to fit the worker and task, and for workers to change postures.
- Improve layout of work stations enabling tools and materials to be kept close to the body.
- Provide step stools, ladders or adjustable work platforms to avoid prolonged periods of reaching to do high-level work.
- Provide portable kneeling creepers with chest support for floor-level work to reduce strain from kneeling or squatting.
- Provide anti-fatigue mats and footrests where workers stand for long periods.
- Provide suitably-designed seats for workers who sit for prolonged periods.

Administrative controls

- Rotate workers between various tasks that involve different muscles.
- Provide frequent microbreaks plus regular scheduled breaks so body tissues can recover.
- Reduce shift length or limit the amount of overtime.
- Develop and implement written safe work practices and procedures and train workers in them.

What can you do?

- Take regular scheduled breaks and frequent microbreaks in a different posture.
- Move and stretch to reduce stiffness and muscle fatigue.
- Adjust your work station to perform work in a neutral posture (work surface at appropriate height, tools and materials close to you).
- Wear footwear with shock-absorbing soles or insoles when working on hard-material surfaces such as concrete.
- Avoid holding tools when they are not being used.
- Follow safe work practices and procedures.
- Report ergonomics-related concerns and any signs or symptoms of MSI.

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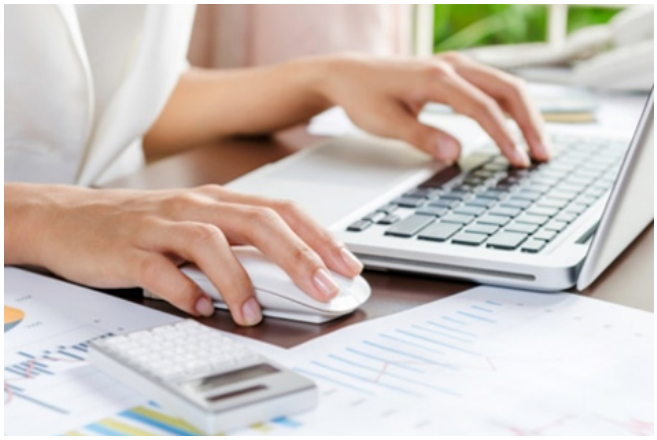
MSI RISK FACTORS

Repetitive Motions

Repetitive motion occurs when the same task is performed over and over, or when different tasks are performed using the same muscles. Without sufficient rest, soft tissue damage can occur.

Examples of repetitive motions:



- Working at the same station in a plant.
- Using hand or power tools for prolonged periods.
- Loading or unloading pallets.
- Handling or packing product.
- Reaching across a line to work with product.
- Typing or using a computer mouse for prolonged periods.
- Using a knife to repeatedly perform the same cut.
- Sweeping and mopping in custodial work.

Risk of injury increases as:

- The number or speed of actions increases.
- Muscles have to exert higher levels of force.
- A body part moves farther away from its neutral position.
- The frequency of task increases.
- The period of time the task is done without a break increases.

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MSI RISK FACTORS

Repetitive Motions

Engineering controls

- Automate processes and tasks to eliminate repetitive manual work.
- Provide easily-adjustable work stations and equipment designed for the worker and task (like height-adjustable work tables, work platforms, or carts).
- Improve layout of work stations allowing tools and materials to be kept close to the body.
- Raise and tilt bins or use spring-loaded inserts.
- Place frequently used items at work level.
- Replace manual hand tools with well-designed power tools if a task requires frequent use of force.
- Schedule the flow of materials to avoid unnecessary repetitive motions or fast paced work.

Administrative controls

- Rotate workers between various tasks that involve different movements and muscles.
- Pace work to reduce the number of repetitions per hour.
- Provide frequent microbreaks in addition to regular scheduled breaks so body tissues can recover.
- Reduce shift length or limit the amount of overtime.
- Develop and implement written safe work practices and procedures.
- Provide instructions in work practices and techniques that can ease task demands.

What can you do?

- Take your regular scheduled breaks and frequent microbreaks.
- Pace your work.
- Change positions and tasks frequently. Switch hands or sides from time to time.
- Stretch affected body parts to relieve physical tension.
- Adjust your work area and position tools and materials close to you.
- Change the pattern of your work to avoid prolonged periods of the same motion.
- Follow safe work practices and procedures.
- Report any ergonomics-related concerns and signs or symptoms of MSI so the appropriate intervention can be implemented.

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MSI RISK FACTORS

Adverse Temperatures

Very warm and very cold work environments increase the physical demands of work.

Cold temperatures
- Reduce blood flow.
- Increase muscle fatigue.
- Reduce grip strength.
- Reduce joint range of motion and flexibility.
- Reduce muscle coordination and strength.
- Increase energy needs to contract muscles.

Hot temperatures
- Increase sweating.
- Increase grip force.
- Alter blood pressure.
- Increase core body temperature.
- Decrease the ability of the body to cool down.
- Increase energy requirements for body function
- Increase fatigue.

Adverse weather conditions may increase the risk of MSIs for outdoor workers. Slippery conditions in winter or excess wind may affect your ability to maintain balance, putting you at increased risk of MSI.

Examples of cold exposure:
- Deboning meat when temperatures must be maintained below certain levels.
- Using a chainsaw in the winter.
- Using a power tool that has air blowing across the hand.

Examples of heat exposure:
- Road paving on a hot summer day.
- Working near hot machines in a non-air conditioned indoor workplace.

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MSI RISK FACTORS

Adverse Temperatures

Control Measures for Cold Environments

- Consider rescheduling outdoor work if it is extremely cold.
- Take breaks in a warm environment.
- Increase frequency of rest periods.
- Dress in warm layers, ensuring an outer layer that is wind resistant.
- Stay dry, including taking steps to prevent excess sweating.
- Warm-up the body before beginning work.
- Cover all exposed skin.
- Wear insulated, waterproof footwear.

Control Measures for Warm Environments

- Use fans or other means of ventilation.
- Alter work schedules, so work is done at cooler times.
- Take breaks in a cool, ventilated area.
- Increase frequency of rest periods.
- Drink plenty of fluids.
- Wear loose-fitting (where appropriate), light-colored clothing.

What can you do?

- If you need to work in adverse temperatures, take frequent microbreaks.
- Take your regularly scheduled breaks.
- Follow safe work practices and procedures.
- Wear appropriate clothing.
- Recognize signs and symptoms of heat and cold-induced conditions.
- Report ergonomics-related concerns and any signs or symptoms of MSI.

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MSI RISK FACTORS

Contact Stress

Local contact stress is the physical contact between body tissues and hard objects or surfaces in the work environment, such as tools, machinery, and work surfaces.

Hard objects pressing into the skin create a pressure point that can compress blood vessels causing restricted blood flow and decreased tissue tolerance, causing an increased risk of injury. Contact stress can also irritate nerves, tendons, and ligaments, compromising their ability to function properly.

Body parts most susceptible to contact stress are the sides of the fingers, palms, wrists, forearms, elbows and knees.

Examples of contact stress:

- Resting forearms on a desk edge.
- Holding a tool that has ridges or hard edges on its handle which dig into the hand.
- Kneeling to do floor work (e.g., laying flooring).
- Striking an object with the hand like a hammer .
- Leaning the stomach against a machine or table edge.
- Sitting with the back of the legs compressed against the front of the seat.

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MSI RISK FACTORS

Contact Stress

Control Measures

- Use ergonomically designed tools with cushioned grips.
- Use the correct tool for the job.
- Use tools that are the proper fit for the worker's hands.
- Use tools with handles long enough to extend beyond the palm and without sharp or hard edges that dig into fingers.
- Select a chair and work surface that suits the worker's body size.
- Use knee pads when work requires kneeling.
- Wear shoe inserts for prolonged standing.
- Wear gloves to protect from sharp, hard objects.

Handle ends do not dig into palm of hand.

What can you do?

- Avoid using the hand, knee or other body parts as a hammer.
- Take your regularly scheduled breaks.
- Follow safe work practices and procedures.
- Change positions and tasks frequently.
- Remove clutter or obstacles in your workstation and keep frequently used materials within easy reach.
- Report ergonomics-related concerns and any signs or symptoms of MSI.

No compression in wrists or behind knees.

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MSI RISK FACTORS

Hand-Arm Vibration

Hand-Arm Vibration (HAV) is a vibration that reaches the hands when working with power tools or hand-guided machines or when holding materials being processed by machines.

Regular exposure can cause permanent injuries to tendons, muscles, bones, joints and nerves in the hands and arms. Collectively, these effects are known as Hand-Arm Vibration Syndrome (HAVS).

Examples of HAV sources:

- Riveters and drills.
- Chisels and grinders.
- Sanders, sharpeners and shapers.
- Chain/power saws .
- Powered/jack hammers.
- Floor buffers (hand-guiding).
- Pedestal grinders (holding materials being processed).

Risk of injury increases with:

- Increased vibration magnitude.
- Increased exposure length and frequency.
- Increased awkwardness of posture.
- Increased force to grip or control equipment.
- Cold hands.

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MSI RISK FACTORS

Hand-Arm Vibration

Engineering Controls

- Look for alternative processes, equipment or work methods that eliminate or reduce exposure (e.g. automate).
- Purchase the lowest vibration tool that is suitable and can do the work efficiently.
- Limit the use of high-vibration tools when possible.
- Adjust worksite design to improve the posture of hands, wrists and arms.
- Use devices such as jigs and suspension systems to reduce the need to grip heavy tools tightly.
- Provide a heating source to keep workers warm.

Administrative Controls

- Develop and implement written safe work practices and procedures.
- Have a policy on the removal/reduction of vibration.
- Keep tools and machines well maintained.
- Limit worker's exposure (e.g. job rotation to reduce hours or number of days).
- Plan to avoid long periods of continuous exposure.
- Provide adequate rest breaks.
- Provide protective clothing for warmth and good blood circulation.
- Train workers in the correct use of tools and machines and the health risks of HAV.

What can you do?

- Use the right tool for the job.
- Wear anti-vibration gloves.
- Avoid using more force than necessary for safe operation.
- Take frequent breaks to minimize continuous exposure.
- Keep whole body warm (e.g., wear a vest), including warm, dry hands (e.g. wear gloves, exercise hands/fingers).
- Do not smoke (reduces blood circulation).
- Inform your supervisor if tools/processes produce high levels of vibration (e.g., poorly functioning tool).
- Report any symptoms (whitening of fingers, pain, numbness, tingling, loss of touch/grip strength).

A symptom of HAVS: whitening of fingers (also known as vibration white finger).

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MSI RISK FACTORS

Improper Lighting

Appropriate lighting makes tasks easier to perform both safely and efficiently. Improper lighting can adversely affect a worker's posture (e.g., painting a wall with shadows), cause eye strain, discomfort (e.g., burning), and headaches.

The quality of lighting in the workplace can impact productivity. Especially where precision is required, tasks may take longer and the quality of work may suffer. Postures held for prolonged periods, healthy or poor, increase MSI risk.

Examples of improper lighting:

- Not enough light
- Too much light
- Glare
- Improper contrast
- Poorly distributed light
- Flickering

Provide sufficient and suitable lighting for tasks. Conduct a complete lighting survey to solve more subtle or complex problems.

Familiarize yourself with the "Illumination" Regulations: Part V, General Health and Safety Requirements, Section 36, NL OHS Regulations.

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MSI RISK FACTORS

Improper Lighting

Control Measures - General

- Use several small low-intensity light fixtures rather than one large high-intensity fixture.
- Provide adjustable local lighting .
- Use more reflected light and local lighting to eliminate shadows.
- Position light fixtures so reflected light is not directed toward the eyes.
- Use matte finishes and light colours on ceilings, walls, floors, and furniture.
- Move shiny objects out of view.
- Do not position a workstation with the light fixture directly behind worker.
- Avoid frequent transitions between extremes of light/dark or near/far.
- Cover lamps to diffuse light evenly.
- Magnify small objects.
- Place simple backgrounds behind tasks.
- Replace bulbs on a regular schedule.

Control Measures - Offices

- Position workstation whereby monitor is between overhead light fittings and worker's line of sight is parallel to windows.
- Use a light colour on walls and other backgrounds.
- Adjust brightness and contrast controls on computer monitors.
- Illuminate documents, but not the monitor, with local lighting.
- Use filters to diffuse overhead lighting.
- Use adjustable blinds or curtains on windows.
- Use matte finishes on furniture and equipment.
- Choose appropriate size computer font.

What can you do?

- Take your regularly scheduled breaks.
- Change positions and tasks frequently.
- Computer users should follow the 20-20-20 rule.
- Report ergonomics-related concerns and any signs or symptoms of MSI.

The 20-20-20 Rule

Take a Break for 20 Seconds | Every 20 Minutes | Look at an Object 20 Feet Away

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MSI RISK FACTORS

Whole-Body Vibration

Whole-Body Vibration (WBV) is vibration from machines and vehicles transmitted into the body through the buttocks, back, or feet – e.g., from sitting on a vibrating seat or standing on a vibrating floor. WBV typically occurs where riding in or driving construction or transportation equipment is required.

Short-term exposure is linked to abdominal and chest pain, headaches, nausea, and loss of balance. Long-term exposure has been linked to back disorders, including lower back pain, as well as having a negative effect on the digestive system and visual performance.

Examples of WBV sources:

- Skid steer vehicle
- Load, haul, dump truck
- Bulldozer
- Backhoe
- Compactor
- Grader
- Forklift
- Asphalt paver
- Transport truck

Risk of injury increases with:

- Increased intensity, frequency and length of exposure over the short term.
- Longer-term, regular and higher intensity exposure.
- Severe shocks or jolts.
- Prolonged seated posture or awkward spine posture.

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MSI RISK FACTORS

Whole-Body Vibration

Engineering Controls

- Choose the most appropriate vehicle/equipment design for the job while also considering vibration emissions and the ability of the operator to avoid awkward postures such as back bending and twisting:
  - Quality of suspension system.
  - Seat suspension design.
  - Seat profile and adjustments (size, fit, lumbar support, seat height adjustment independent of suspension).
  - Cab design and visibility.
- Use high-intensity lighting to better judge surface conditions.
- Use remote-controlled equipment to move material rather than human-operated equipment.
- Design work to reduce transport distance.

Administrative Controls

- Develop and implement written safe work practices and procedures.
- Have a policy on the removal/reduction of vibration.
- Keep vehicles/equipment regularly maintained, including drive-train isolation, vehicle suspension systems and operator platform and seat.
- Keep regular maintenance of road surfaces and other rough terrains.
- Limit operator's exposure to fewer hours per day.
- Incorporate adequate rest periods in work schedules.
- Provide warm, waterproof clothing during cold weather so muscles do not tighten.
- Train operators in the safe use of equipment and health risks of WBV.

What can you do?

- Perform physical exercises to warm up the body.
- Adjust the vehicle seat to your body weight and accommodate a neutral posture.
- Reduce driving speed for surface conditions.
- Take frequent breaks to minimize exposure. Vehicle operators should stand and stretch every hour.
- Report rough terrain requiring maintenance.
- Report any poorly maintained equipment (e.g., insufficient tire pressure).
- Report any vibration-related symptoms.

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SAFETY TALK ATTENDANCE SHEET

TOPIC: _____

FACILITATOR: _____ **DATE:** _____

Participant's Name (Please Print)	

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