

Workplace injury prevention guide.

Simple tips to keep you moving safely.

This guide covers common workplace tasks that can increase injury risk if done improperly, and provides practical strategies to help keep you safe. The goal is simple: Make work easier on the body and reduce preventable injuries.





Understanding ergonomic injuries

Ergonomic injuries happen when the body is stressed by poor posture, repetitive motions, heavy lifting, or forceful tasks. They can affect muscles, joints, tendons, and nerves.

Main contributors to injury:

- Awkward postures (twisting, reaching, bending)
- Heavy force or lifting
- Repetitive motions
- Contact stress (hard or sharp surfaces)
- Vibration from tools or vehicles

Real-world examples:

- Reaching across a conveyor to grab parts, shift after shift
- Lifting large totes because parts are packed too high or too heavy
- Pushing a cart that drags due to worn casters

Key point: The more risk factors present at one time, the higher the chance of injury.

Hierarchy of controls

Not all fixes are created equal. Some solutions remove the hazard altogether, while others simply protect you from it. The hierarchy of controls helps you choose the most effective way to reduce risk.

A structured approach to reduce hazards:

	Control type	How it works	Example
Most effective	Eliminate or substitute	Remove the hazard or replace with something safer	Order products in smaller containers, use mechanical lifters
↓	Engineering controls	Redesign tasks or equipment to remove risk	Automate lifting, redesign parts to reduce manual handling
	Administrative controls	Use policies or procedures to limit exposure	Job rotations, work-rest schedules
	Least effective	PPE (personal protective equipment)	Protects the worker as a last line of defense

Note: PPE should not be your only solution—equipment can fail without warning.

Safe body mechanics

How you move matters. Using your body in a way that keeps joints aligned and reduces strain helps prevent injuries before they start.

Neutral posture

A neutral posture keeps your body aligned and reduces strain.

What it looks like:

- Spine straight
- Shoulders relaxed
- Elbows close to the body
- Wrists straight
- Knees slightly bent

Keep the load close and avoid twisting:

- Hold items near your waist
- Clear space to bring materials closer
- Twist your feet, not your back

Example:

Grabbing a box from the far side of a pallet forces twisting. Using a turntable eliminates the twist.

Push instead of pull

Pushing uses larger muscles and is easier on the back and shoulders.

Tips when pushing:

- Bend knees and lean slightly into the object
- Keep your back straight
- Use your legs and body weight
- Take small, controlled steps

Work in the power zone

Keep tasks between mid-thigh and mid-chest, close to your body.

Examples of quick fixes:

- Lower racks so materials are stored within reach
- Raise pallets with lift tables
- Angle bins to avoid reaching into deep containers



Lifting and material handling

Force matters

Heavy loads or strong exertion increase injury risk. Muscles and tendons can overload when the force is too high.

Best practices:

- **Share the load:** Team lifts for bulky items
- **Reduce the load:** Follow weight limits (e.g., ≤35 lbs)
- **Check carts:** Push or pull forces shouldn't exceed ~50lbs
- **Use equipment:** Hoists, powered lifters, or carts

Real-world examples:

- A worker lifting a 60-lb bag from the floor to a hopper—use a mechanical assist or reduce bag size
- A cart requiring two hands and a running start—likely exceeding force limits; replace casters or reduce load

Quick wins:

- Swap standard casters for low-resistance ones
- Use smaller bins to control weight
- Install rollers or glides to eliminate dragging

Tools and posture:

- Keep wrists aligned with hands
- Tilt containers for easier reach
- Minimize reaching with proper tools

Repetition and fatigue

Repetitive tasks don't allow muscles enough time to recover. Tasks may be considered highly repetitive if the cycle time is 30 seconds or less. Repeating the same motion without rest increases strain, especially when combined with heavy force or awkward posture.

Reduce the Impact

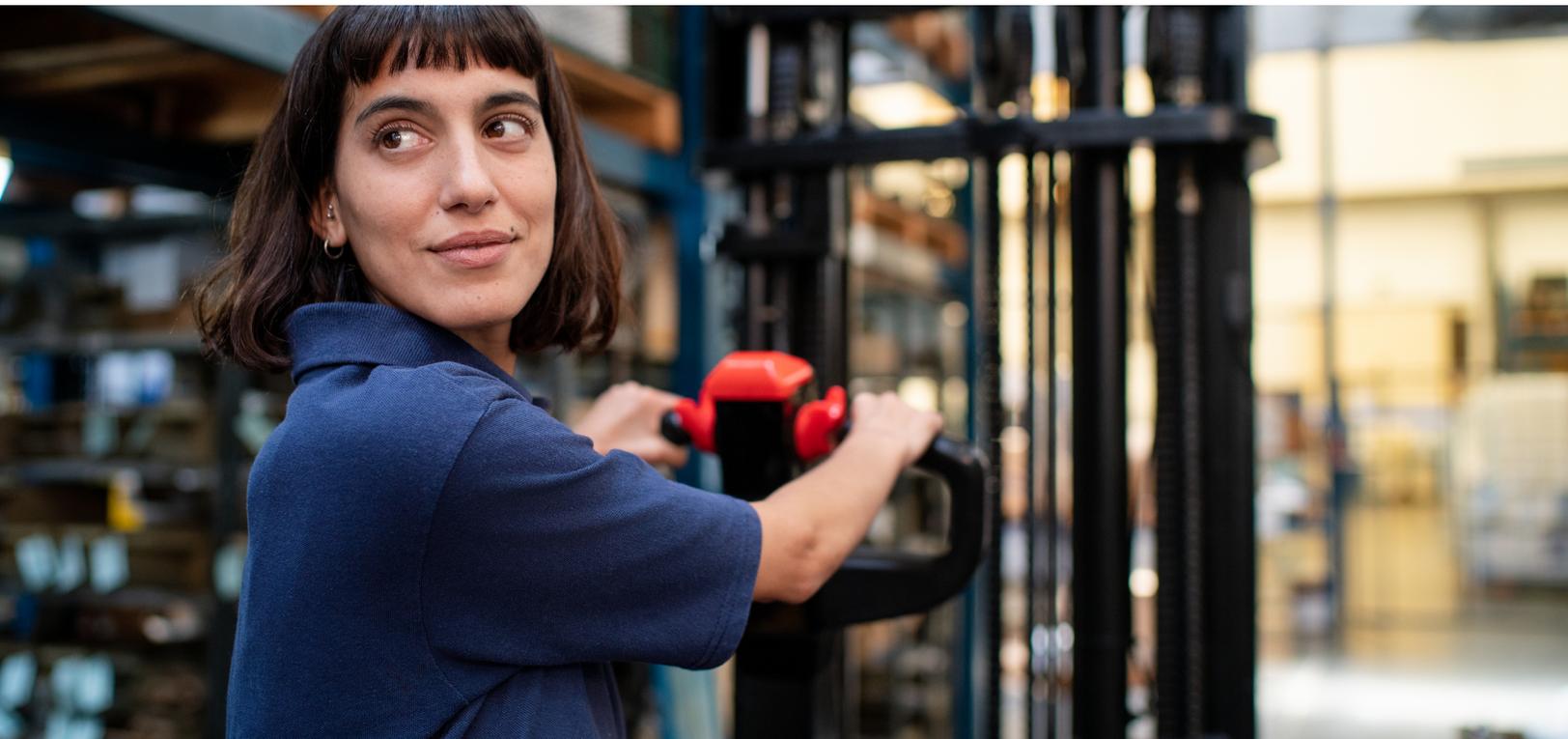
- Lower the force and awkward posture required
- Teach efficient techniques and tips workers have discovered
- Slowly increase exposure (work hardening)
- Rotate tasks to use different muscle groups

Micro and stretch breaks

- Micro breaks: 60–90 seconds every 20–30 minutes
- Stretch in the opposite direction of the task
- If you're sitting, stand up; if standing, sit down

Example:

Packaging small items for hours without a break can cause wrist and shoulder strain—micro breaks help reset the muscles.





Contact stress

This happens when soft tissues press against a hard surface, which can restrict blood flow and irritate nerves.

Reduce contact stress

- Choose bins or boxes with handholds
- Add clamp-on or padded handles
- Use ergonomic tools
- Wear gloves to reduce pressure on palms

Example:

Carrying smooth, handle-less boxes digs into the fingers—adding handles dramatically reduces strain.

Vibration

Tools and equipment that vibrate can take a toll on the body over time. Understanding the type of vibration and how to control it keeps workers safer and reduces long-term fatigue.

Types:

1. **Hand-arm vibration:** From tools like grinders, drills, jackhammers
2. **Whole-body vibration:** From driving or riding vehicles

Risks

- Tingling or numbness
- Increased muscle fatigue
- Reduced grip strength
- Potential nerve and blood vessel damage

How to reduce risk

- Choose low-vibration tools
- Use anti-vibration gloves for high-vibration tasks
- Maintain tools and keep cutting surfaces sharp
- Use minimal grip pressure
- Rest tools on surfaces when possible
- Take regular breaks
- Report symptoms early

Worker engagement

Workers are the closest to the task and often notice when something feels heavy, awkward, or repetitive.

Encourage workers to:

- Speak up about strained or uncomfortable tasks
- Suggest improvements
- Report hazards early
- Share tips that make their tasks easier

A simple fix spotted by a worker often prevents a major injury.



Putting it all together

No single fix eliminates every risk. Safety improves most when multiple strategies work together to reduce strain, lower force, and create a more comfortable, sustainable workflow.

The safest workplaces combine:

- Good posture
- Reduced force
- Mechanical assistance
- Breaks and rotation
- Proper tool selection
- Ongoing feedback from workers

Comprehensive risk assessments help uncover hazards and guide improvements.

If a task feels **too heavy, too far, too repetitive, or too awkward**, say something early. Small adjustments now prevent big injuries later.



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