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Advanced Musculoskeletal Injury Prevention and Workplace Ergonomics Training Course

31 January – 11 February 2027
Kuala Lumpur

Advanced Musculoskeletal Injury Prevention and Workplace Ergonomics Training Course

Ref: 802_30443 **Date:** 31 January – 11 February 2027 **Location:** Kuala Lumpur **Fees:** 8000 GBP

Musculoskeletal injury prevention and workplace ergonomics is a 2-week advanced training course for ergonomists, occupational health advisers and HSE practitioners, in which each participant builds a musculoskeletal injury prevention plan for a real site. Strain injuries to backs, necks and upper limbs remain a leading cause of lost time, and their roots lie in task, station and shift design. Jupiter Prime Training runs this course for practitioners who must turn ergonomic findings into lasting change.

Why Musculoskeletal Injury Prevention and Workplace Ergonomics Matters Now

Three forces shape strain prevention today. Workforces are older and more varied, so tasks set for one body type now injure others. Faster lines and picking targets add repetition, while hybrid desk work spreads screen strain beyond the office. An organisation that redesigns tasks early keeps skilled people at work and avoids long absence; one that relies on lifting posters sees the same cases return. The course rests on ISO 45001, the occupational health and safety management system standard, and its emphasis on worker participation.

Who Gains Most from Musculoskeletal Injury Prevention and Workplace Ergonomics

- Practitioners who assess physical task demands and recommend station changes
- Advisers who manage strain injury cases and fitness for work decisions
- Specialists who design handling aids, tooling and layouts with engineers
- Leads who track discomfort surveys, absence and injury records
- Coordinators who plan modified duties and graded returns with line managers

Occupational health and HSE teams that attend together with an engineer gain most, because redesign needs both clinical insight and the authority to change equipment.

Musculoskeletal Injury Prevention and Workplace Ergonomics Capabilities

Participants learn to trace a strain injury back to the force, posture and pace of a task, then remove the cause rather than coach around it.

- Assess task exposure through observation, video and force measurement — for intervention priority
- Calculate hotspot rankings from discomfort surveys and absence records — for safety committees
- Design workstation and handling changes within the hierarchy of controls — for engineering and facilities
- Specify rotation, break and shift adjustments that limit fatigue — for operations managers
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Build return to work pathways with modified duties — for line managers and recovering staff
- Communicate the cost of strain injuries and the case for equipment — for budget holders

Key Musculoskeletal Injury Prevention and Workplace Ergonomics Terms

- Musculoskeletal disorder — an injury or pain in muscles, tendons, nerves or joints linked to force, posture, repetition or vibration at work.
- Anthropometry — measurement of body dimensions used to size work heights, reaches, seats and clearances for most of the workforce.
- Reach envelope — the space a worker can reach comfortably without stretching, twisting or leaning while seated or standing.
- Static loading — holding one posture for a long time so muscles work without rest, causing fatigue and discomfort.
- Participatory ergonomics — an approach in which the workers who do a task help identify strain sources and design the fixes.
- Modified duty — temporary work adjusted to a recovering employee's restrictions so they stay productive while healing.

Musculoskeletal Injury Prevention and Workplace Ergonomics Day by Day

Day 1: Forces Behind Strain Injuries

- Musculoskeletal Disorder Burden — Ranking Back, Neck and Upper Limb Claims
- Ageing and Mixed-Ability Workforces — Adjusting Task Demands to Capacity
- Hybrid Desk Work — Extending Prevention to Home and Shared Desks
- Automation and Pace — Spotting New Repetition at Assisted Stations
- ISO 45001 Worker Participation — Involving Staff in Hazard Identification

Day 2: Injury Data and Early Signals

- Body Part Discomfort Surveys — Locating Pain Before Claims Appear
- Injury and Absence Records — Coding Strain Cases by Task
- Symptom Reporting Pathways — Removing Barriers to Early Disclosure
- Leading Versus Lagging Indicators — Choosing Strain Prevention Measures
- Hotspot Ranking Matrix — Selecting Tasks for First Intervention

Day 3: Task Observation and Exposure Screening

- Walk-Through Observation Checklists — Recording Force, Posture and Frequency
- Video Task Breakdown — Separating Cycles Into Measurable Elements
- Posture Screening Tools — Choosing a Method That Fits the Task
- Push and Pull Force Gauges — Measuring Trolley and Cart Effort
- Hand-Arm Vibration Exposure — Linking Tool Use to Grip Strain

Day 4: Manual Handling Controls

- Lift Elimination Options — Conveyors, Hoists and Vacuum Lifters
- Load Redesign — Splitting Weights and Adding Handles
- Team Lifting Protocols — When Two-Person Handling Is Acceptable
- Patient and Resident Handling Aids — Slide Sheets and Ceiling Hoists
- Handling Technique Coaching — Limits of Training as a Control

Day 5: Workstation and Tool Design

- Anthropometric Data — Sizing Benches for the 5th to 95th Percentile
- Reach Envelopes and Work Heights — Placing Parts Within Easy Range
- Display Screen Equipment Set-Up — Chair, Screen and Keyboard Positions
- Hand Tool Selection — Grip Diameter, Trigger Force and Weight
- Anti-Fatigue Flooring and Sit-Stand Options — Reducing Static Standing Load

Day 6: Fatigue, Pace and Work Organisation

- Shift Pattern Review — Night Work and Recovery Time Decisions
- Micro-Break and Job Rotation Schedules — Spreading Load Across Muscle Groups
- Line Speed and Takt Pressure — Balancing Output With Recovery
- Heat and Cold Stress — Effects on Grip and Muscle Fatigue
- Psychosocial Load Factors — Job Control, Demands and Strain Reporting

Day 7: Designing Ergonomic Interventions

- Hierarchy of Controls for Strain Hazards — Elimination Before Coaching
- Participatory Ergonomics Teams — Worker-Led Redesign of Stations
- Low-Cost Fix Catalogue — Quick Wins on Reach and Height
- Cost of Strain Injuries — Building the Case for Equipment Spend
- Prototype and Trial Stations — Testing Changes Before Full Roll-Out

Day 8: Sector Cases in Strain Prevention

- Hospital Ward Handling — Bed Transfers and Repositioning Tasks
- Construction Site Tasks — Blockwork, Overhead Drilling and Rebar Tying
- Warehouse Picking — Case Weights, Shelf Heights and Pick Rates
- Control Room and Office Work — Screen Time and Sedentary Load
- Assembly Line Stations — Fixture Heights and Repetitive Fastening

Day 9: Return to Work and Case Management

- Case Triage Pathway — Self-Care, Physiotherapy or Specialist Referral
- Fitness for Work Notes — Turning Restrictions Into Task Limits
- Modified Duty Matching — Pairing Recovering Staff With Suitable Tasks
- Graded Return Schedules — Building Hours and Load Over Weeks
- Recurrence Prevention Reviews — Checking Whether the Original Task Changed

Day 10: Practising the Injury Prevention Plan

- Hotspot Evidence Pack — Combining Survey, Records and Observation Findings
- Control Selection Sheet — Matching Each Hotspot to Redesign Options
- Fatigue and Rotation Adjustments — Fitting Changes Into Shift Rosters
- Return to Work Protocol — Linking Case Steps to Modified Tasks
- Musculoskeletal Injury Prevention Plan — Owners, Milestones and Measures

Applying Musculoskeletal Injury Prevention and Workplace Ergonomics After the Course

- Run a body part discomfort survey across two departments and rank the first three hotspot tasks
- Trial one low-cost station change with a participatory ergonomics team and record discomfort before and after

Musculoskeletal Injury Prevention and Workplace Ergonomics Questions FAQ

What is musculoskeletal injury prevention and workplace ergonomics and why does it matter now?

It is the practice of fitting tasks, stations and schedules to people so strain injuries do not develop. It matters now because older workforces, faster lines and hybrid desk work raise back, neck and upper limb cases.

Which roles gain most from musculoskeletal injury prevention and workplace ergonomics training?

Ergonomists, occupational health advisers and HSE practitioners gain most. Anyone who assesses physical tasks, manages strain injury cases or plans modified duties will apply the methods directly.

How does musculoskeletal injury prevention and workplace ergonomics training differ from an ergonomics risk scoring course?

It goes beyond scoring postures. You move from injury data and early symptoms to redesigned stations, fatigue controls and return to work pathways, so prevention covers the whole life of a strain case.

What do you bring back from musculoskeletal injury prevention and workplace ergonomics training?

You bring back a musculoskeletal injury prevention plan with ranked hotspots, chosen controls, owners and measures, plus a return to work protocol ready for your site.

Musculoskeletal Injury Prevention and Workplace Ergonomics: The Way Forward

The musculoskeletal injury prevention plan first informs which hotspot task receives redesign funding this quarter. Occupational health, engineering and line managers use it to assign owners and track discomfort trends. After the first redesign is in place, revisit whether rotation and break schedules still suit the new station and whether strain reports fell.