OPINION ARTICLE Ergonomic Hazard: Types and Causes

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Description

Employees may be at risk of musculoskeletal injuries due to physical conditions known as ergonomic hazards. Awkward postures, immobile postures, high forces, repetitive motion, or brief breaks between activities are examples of ergonomic risks. When several conditions are present, the chance of harm is frequently increased. Negative interactions with the worker or user can be caused by a variety of factors, including wholebody or hand/arm vibration, bad lighting, and poorly constructed tools, equipment, or workstations. Among the typical bodily parts that may sustain injuries are, but are not limited to;

- Lower back ligaments or muscles.
- Ligaments or muscles in the neck.
- Hand/wrist muscles, tendons, or nerves.

• The knees and the muscles and bones that surround them.

Musculoskeletal Disorders (MSDs), also known as Cumulative Trauma Disorders (CTDs) or Repetitive Strain Injuries (RSIs), are thought to be responsible for around one-third of all non-fatal injuries, diseases, and expenses due to injuries to these and other regions of the body. Both occupational and non-occupational contexts, such as workshops, construction sites, offices, homes, schools, or public spaces and facilities, might have ergonomic risks. The risk of harm can be decreased by finding solutions to minimize or lessen ergonomic hazards in any environment.

Causes

Awkward posture: when performing work-related activities, the body strays greatly from the neutral position. Due to the needless reach or stretch of the body's neutral position, awkward postures decrease labour productivity. Muscle and nerve squeeze may happen as a result of prolonged uncomfortable posture. Examples include twisting, reaching, tugging, lifting, bending, or any other posture that, when maintained for an extend-

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ed length of time, might create pain.

Static posture: When performing a task or work, employees may adopt a static posture for an extended amount of time. It is an issue because many people adopt this position without thinking about it either they are accustomed to it or because they are unaware of the potential harm it might wreak. Exposure to a static position might cause joint and muscle soreness. Workers in industries often have a static posture.

Contact stress: Another aspect that contributes to ergonomic risk is contact stress, which happens when a worker's fingers, wrists, knees, or other body part repeatedly or continuously rubs up against a hard, sharp, or immobile surface without moving. The surface can be a desk, a ladder, the ground, a bucket handle, or a piece of equipment. Pushing, grabbing, pinching, pulling, and lifting objects can result in increased contact stress that can put pressure on the joints of the body. When there is little time for rest and recuperation, increasing these pressures necessitates more muscle effort and places heavier stresses on joints and connective tissues, which can lead to tiredness and perhaps contribute to musculoskeletal problems.

Repetitive motion: Repetitive motion is the act of doing a specific movement repeatedly over an extended period of time. This will wear out your muscles and eventually cause nerve damage. The soft tissues, including the nerves, muscles, and tendons, may be hurt as a result of this action. Tennis elbow, carpal tunnel syndrome, tendonitis, bursitis, and other names are given to some of these wounds. To ensure productivity, these actions require intervals between tasks to allow the nerve or muscles to recuperate.

High forces: High forces are required to complete a task and may harm joints and muscles. If the amount of force employed has caused the entire body or a section of it to become exerted, the excessive force load could become a problem. The application of force may involve gripping, pinching, pushing, pulling, and lifting items.

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