OPEN ACCESS Freely available online

Journal of Ergonomics

ISSN: 2165-7556

Commentary

Ergonomic Risk Factors for Ankle Sprains

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DESCRIPTION

Ankle sprains are one of the most common musculoskeletal injuries in both athletic and occupational settings. The implications of ankle sprains in the context of ergonomics are extreme, affecting worker productivity, health, and safety. Understanding the ergonomic factors contributing to ankle sprains, the impact on workplace performance, and the strategies for prevention and rehabilitation can significantly enhance workplace safety and efficiency. An ankle sprain occurs when the ligaments that support the ankle stretch beyond their limits and tear. Ligaments are tough, elastic fibers that connect one bone to another. Sprains can range from mild to severe. The most common type of ankle sprain is the inversion sprain, where the foot rolls inward, causing damage to the lateral ligaments. Slippery surfaces, uneven flooring, and cluttered workspaces increase the risk of ankle sprains. Environments that require quick movements or changes in direction also pose higher risks.

Inappropriate footwear can contribute to poor foot and ankle stability. High heels, ill-fitting shoes, and shoes without adequate support or grip can increase the likelihood of a sprain. Workers engaged in repetitive movements or standing for prolonged periods are at risk. Repetitive strain can weaken the muscles and ligaments around the ankle, making them more susceptible to injury. Poor physical conditioning, including weak muscles and lack of flexibility, can contribute to ankle instability. Workers who do not engage in regular physical activity may have weaker supportive structures around the ankle. Ankle sprains can lead to significant time off work, reducing overall productivity. Even minor sprains may result in decreased efficiency due to pain and discomfort. Severe ankle sprains can necessitate long periods of rest and recovery, leading to increased absenteeism. This not only affects the injured worker but also places a strain on their colleagues who must compensate for the absence. The treatment and rehabilitation of ankle sprains involve healthcare costs, which can be substantial depending on the severity of the injury. This includes medical consultations, physiotherapy, and potential surgical interventions. An ankle sprain can have a cascading effect on workplace safety. An injured worker is more likely to have subsequent injuries, and the presence of injury risks can create a culture of caution that affects overall morale and safety practices.

Implementing ergonomic principles in workplace design can mitigate the risk of ankle sprains. This includes ensuring even flooring, reducing clutter, and providing adequate lighting to prevent trips and falls. Employers should ensure that workers have access to appropriate footwear. This means shoes that provide adequate support, fit well, and have non-slip soles. Encouraging workers to engage in regular physical activity can strengthen the muscles and ligaments around the ankle, reducing the likelihood of sprains. Workplace wellness programs can include exercises specifically aimed at improving balance and ankle strength. Educating workers about the risks of ankle sprains and the importance of proper footwear and workspace organization can foster a proactive approach to injury prevention. In certain high-risk environments, the use of assistive devices such as ankle braces or supports can provide additional stability and reduce the risk of injury. Prompt treatment of ankle sprains is crucial. Initial management typically involves Rest, Ice, Compression, and Elevation (RICE). Early intervention can minimize swelling and prevent further damage.

Rehabilitation should include physical therapy to restore range of motion, strength, and stability. A tailored exercise program can help workers regain full function and prevent future injuries. A phased return to work can help prevent re-injury. This may involve modified duties or reduced hours initially, gradually increasing as the worker recovers. Regular follow-up and monitoring can help ensure that the worker fully recovers and maintains good ankle health. This includes periodic assessments by healthcare professionals and adjustments to the rehabilitation program as needed. In a manufacturing plant, ankle sprains were prevalent due to uneven flooring and the need for workers to navigate quickly through tight spaces. The company implemented a comprehensive ergonomic assessment, leading to the installation of anti-slip mats, reorganization of the workspace to reduce clutter, and provision of supportive footwear. As a result, the incidence of ankle sprains dropped by 40% within a year. Retail workers often experience ankle sprains due to

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Received: 30-Apr-2024, Manuscript No. JER-24-31519; **Editor assigned:** 03-May-2024, PreQC No. JER-24-31519 (PQ); **Reviewed:** 17-May-2024, QC No. JER-24-31519; **Revised:** 24-May-2024, Manuscript No. JER-24-31519 (R); **Published:** 31- May- 2024, DOI: 10.35248/2165-7556- 24.14.394

Citation: Alsafran M (2024) Ergonomic Risk Factors for Ankle Sprains. J Ergonomics. 14:394.

prolonged standing and the necessity to quickly move between aisles. A retail chain introduced a wellness program that included balance training exercises and flexibility routines. Additionally, they mandated the use of ergonomic footwear and improved the layout of their stores to minimize obstructions. This holistic approach led to a significant decrease in workplace injuries, enhancing both employee well-being and productivity.

CONCLUSION

Ankle sprains, while common, can have significant implications in the workplace, affecting productivity, safety, and healthcare costs. By understanding the ergonomic risk factors and implementing effective prevention and rehabilitation strategies, employers can reduce the incidence of these injuries and create a safer, more productive work environment. A proactive approach, integrating ergonomic principles with health and wellness initiatives, is essential for minimizing the impact of ankle sprains on workers and workplaces alike.