

Benefits of Training on the SHREDmill, a Non-motorized Resistance Treadmill

Commentary

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Abstract

The SHREDmill, a non-motorized, non-curved resistance treadmill, offers significant benefits for sports training, particularly in activities requiring high speed and agility, such as football. Its design promotes natural running mechanics, crucial for performance enhancement and injury prevention. Customizable incline and resistance settings allow for tailored training to simulate specific athletic movements, enhancing both safety and effectiveness. Advanced software provides real-time feedback on performance metrics, enabling immediate adjustments and continuous improvement. The SHREDmill's compact design supports high-intensity sprint training in confined spaces, making it ideal for gyms and training facilities. Athletes, such as football players benefit from the SHREDmill's ability to replicate short sprints and explosive power, essential to their training regimen.

Key Words: Football, Speed, Sprinting

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Introduction

In the field of athletic performance, particularly for sports demanding high levels of speed and agility, such as professional football, the SHREDmill, a non-motorized, non-curved resistance treadmill, presents considerable advantages in training and injury prevention. The SHREDmill's design promotes natural running mechanics, crucial for performance enhancement and injury prevention. Unlike curved treadmills that may alter an athlete's gait, the SHREDmill enables athletes to maintain their natural stride. Proper biomechanics may reduce the risk of injuries such as hamstring strains and joint issues, common in high intensity sports^{1,2}.

A prominent feature of the SHREDmill is its safety. Its non-motorized, self-propelled nature allows athletes full control over their speed and effort, mitigating the risk of soft tissue injuries. The SHREDmill offers adjustable settings for both incline and resistance, permitting modified training to meet the specific needs of each athlete. For example, a high-resistance, moderate-incline setting can simulate an initial burst, essential for positions including running backs and linebackers.

Conversely, a low-resistance, steep-incline setting can mimic longer sprints, beneficial for wide receivers and defensive backs^{1,2}. A study comparing peak speeds during different incline and resistance settings on a non-curved treadmill found that as resistance and incline increased, peak sprinting speeds decreased. This finding indicates that athletes can fine-tune their training intensity on the SHREDmill to align with their conditioning and performance goals, thereby enhancing both safety and effectiveness¹.

The SHREDmill incorporates advanced software providing real-time feedback on various performance metrics, including power output, stride length, and frequency. This immediate feedback enables athletes and coaches to make

on-the-spot adjustments to training routines, ensuring continuous improvement and reducing injury risks. Such detailed and instant feedback may not be available with some curved treadmills, leaving it unable to capture these metrics. Furthermore, the SHREDmill's compact design ensures minimal space occupancy, making it an excellent option for gyms and training facilities where space is limited. Unlike traditional sprinting, which requires a large field, the SHREDmill allows athletes to perform high-intensity sprint training in a confined area. This is particularly beneficial for football players who need to practice short sprints and explosive movements, facilitating effective training regardless of weather conditions or outdoor space availability.

Specific Training for Football Athletes

Football training emphasizes short sprints and explosive power. The SHREDmill can replicate these training conditions with its adjustable resistance and incline settings. Integrating sprints at a high resistance setting helps players develop explosive power and quick acceleration, crucial for positions that need to make rapid, powerful movements during plays.

To improve top-end speed, players can use lower resistance and steeper incline settings to simulate longer sprints, such as those performed by wide receivers and defensive backs when running routes or covering opponents. This training enhances their maximum velocity, essential for outrunning defenders or closing coverage gaps. Additionally, the SHREDmill can be utilized for conditioning drills. By varying the resistance and incline, coaches can design interval training sessions that mimic the stop-and-go nature of football. This not only improves cardiovascular fitness but also trains the body to recover quickly between high-intensity efforts, critical during games.

The SHREDmill's capacity for resistance training is particularly advantageous. Resistance training on the SHREDmill may enhance strength and endurance, particularly in the lower body. This is crucial for football players who rely heavily on their legs for sprinting, jumping, and maintaining position during contact. Exercises such as resisted sprints can improve the power output of the hamstrings and quadriceps, leading to more explosive starts and better overall speed^{1,2}.

Conclusion

The SHREDmill offers significant benefits for athletes, particularly those in sports requiring speed and quickness like football. The design supports appropriate biomechanics, ensuring safety and enhancing performance. The ability to customize training with adjustable incline and resistance settings, combined with data-driven feedback and space efficiency, positions the SHREDmill as an outstanding choice for developing speed and power. By integrating the SHREDmill into football training programs, coaches can effectively enhance their athletes' performance, leading to better results on the field.

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