



Effects of Skeletal Muscle Hypotrophy on Active People and Athletes

Dian Dougal*

Department of Pharmacology, Institute of Clinical Medicine, University of Oslo, Oslo, Norway

*Corresponding Author: Dian Dougal, Department of Pharmacology, Institute of Clinical Medicine, University of Oslo, Oslo, Norway; E-mail: diandoug@gmail.com

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Description

Skeletal muscle hypotrophy, or the loss of muscle mass and strength, can occur due to a variety of reasons such as injury, illness, aging, and inactivity. While it can affect anyone, it can have a significant impact on active individuals and athletes.

Loss of muscle strength and endurance

One of the primary effects of skeletal muscle hypotrophy is a significant loss of muscle strength and endurance. When the muscle mass decreases, the force that can be produced by the muscles also decreases. This can make it difficult for athletes to perform their sport at the same level of intensity as before. Additionally, with decreased endurance, athletes may not be able to perform for as long or with the same intensity as they were able to before [1,2].

Increased risk of injury

Skeletal muscle hypotrophy can also increase the risk of injury. When the muscles are weaker, they may not be able to withstand the same level of stress as before. This can make athletes more susceptible to injuries such as strains, sprains, and tears. Additionally, the loss of muscle mass can lead to changes in joint mechanics, which can also increase the risk of injury [3].

Impaired performance

Athletes who experience skeletal muscle hypotrophy may also experience impaired performance. With decreased muscle mass and strength, athletes may not be able to perform the same movements with the same speed, power, or precision as before. This can affect their overall performance and may impact their ability to compete at the same level as before [4,5].

Psychological effects

Skeletal muscle hypotrophy can also have psychological effects on athletes. Athletes may feel frustrated or disappointed with their decreased performance, which can lead to anxiety or depression. Additionally, they may feel a loss of identity if their sport was a significant part of their life before the muscle loss. It is essential to

address these psychological effects to support the athlete's mental health during their recovery [6].

Rehabilitation and treatment

Rehabilitation and treatment of skeletal muscle hypotrophy in athletes and active people focus on restoring muscle mass, strength, and endurance. Physical therapy, including resistance training and other exercises, is the primary mode of treatment for skeletal muscle hypotrophy. Resistance training helps to stimulate muscle growth and promote muscle strength, which can help restore lost muscle mass and improve overall performance [7,8].

In some cases, other treatments may also be necessary, such as nutritional interventions or medications. Nutritional interventions may include increasing protein intake or other dietary changes that can promote muscle growth. Medications, such as anabolic steroids, may be prescribed in some cases to promote muscle growth. However, the use of anabolic steroids should only be done under medical supervision due to their potential for abuse and adverse health effects [9,10].

Conclusion

Skeletal muscle hypotrophy can have significant effects on active individuals and athletes. It can cause a loss of muscle mass and strength, increase the risk of injury, impair performance, and cause psychological effects. Rehabilitation and treatment of skeletal muscle hypotrophy focus on restoring muscle mass, strength, and endurance through physical therapy, nutritional interventions, and medications if necessary. Early recognition and treatment of skeletal muscle hypotrophy can help prevent long-term consequences and support individuals in returning to their active lifestyles.

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