What kind of exercise can benefit the muscular strength of the obliques?

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Abstract

A confusing muscle group for many people that exercise is the oblique muscle. The obliques are the muscles located on the side of the body in between the hip and the rib cage and are incharge of rotating the trunk. Oblique tears are a common injury and many people are confused if they're doing too much, too little, or the wrong exercises. Resistance training can help benefit the strength and endurance of the muscle which could potentially lower the risk of an injury since it is keeping the muscle active. Machines allow for the user to target a certain muscle group more effectively but lack in activating the stabilizing muscles. Creating a machine for the oblique muscle could benefit the growth and development of the muscle.

What Kind of Exercise Can Benefit the Muscular Strength of the Obliques?

Introduction

Getting in the gym can be hard, there are different types of training, recoveries, and routines that could be followed in order to achieve a certain goal. David Higdon (1989) explained that when the human body is exposed to physical stress, it will respond by getting stronger. The way that the human body is exposed to physical stress can however be different. Muscular strength focuses on power output, sets, and lower repetitions in order to become stronger. The recommended amount of reps per set varies from 6 to 10. Muscular endurance focuses more on form, function, and high repetitions. The recommended amount of repetitions varies from 10-20. Using proper form and technique is important because failure to do so can lead to an injury. Not only is it dangerous but it can be less effective and leave weak links in the muscle. Nutrition Action Healthletter(1989) demonstrated that muscles will get stronger when they are challenged to lift or pull an object. The weight that is started with matters because then the body will fall into the strength or endurance repetition range. However if the weight is too light, it won't send the right kind of signal that makes the muscle bigger and stronger. The average amount of reps that should be done is 8 to 12 before a rest is needed. If the weight is too heavy and only 5 or 6 reps could be done it could be dangerous. Doing too much weight with not a lot of reps can injure the muscle, joints, and tissue around the muscle. No matter the type of muscle training done, stretching should always be completed at some point after the workout. Not stretching after a workout can have a negative effect on the range of motion of the joints. If range of motion is affected, the overall workout routine can be affected leaving muscles with weak links. Michele Stanten (1997) brings up that muscle training has many health benefits as

well such as increase in strength, bone density, and the body's average calorie burning rate. Muscle training reduces the risk of diabetes, osteoporosis, heart disease, colon cancer, and decreases body fat. It also helps improve digestion, balance, mood, and sleep. Parker Pope (2018) informs the reade that the obliques are a part of the abdominal muscles that allow people to twist. In order to exercise this muscle group a lightweight can be used to stretch the obliques. By slowly leaning to the right and left for 3 second intervals the obliques get taught to lengthen and improve stability. 4 sets of 20 repetitions is recommended in order to benefit the endurance of the obliques. Jorge Ortiz (2008) says that many MLB teams such as the Detroit Tigers face and put emphasis on the oblique muscle group since it is commonly injured among their players. Dave Dombrowski, Phillies general manager, questions if their team is doing too much, too little, or the wrong exercises. Since tearing an oblique affects every day activities, people are eager to find out what to do in order to train the obliques with an intensity that could prevent injury and increase strength. What kind of exercise can benefit the muscular strength of the obliques?

Methodology

The Gale in Context STEM database was used in order to find the press articles in the introduction. The Ebscohost STEM database was used in order to find the research articles.

Results of Research

Resistance training is the idea of using weight in order to fatigue and break down muscle fibers in the targeted muscle(s). Muscle hypertrophy can be affected by higher RT frequencies by elevating the rates of post-training muscle protein synthesis. A study was conducted where two

types of resistance training were used in order to see which one maximizes strength performance and muscle hypertrophy. The two types of resistance training are resistance training with equalized total training volume (RTEV) and resistance training with unequalized total training volume (RTUV). The main difference between the two is that the total training volume is not always equalized so the point was to see the difference when it is vs when it isn't equalized. In the quadricep femoris, it was found that there were no significant differences in the 1RM performance test after a 9 week RT program. Each muscle group was trained either once or three times a week and the muscle group that trained with a greater frequency showed a much greater increase in the 1RM test. Individuals who have not trained before can increase muscle strength approximately by 40% from ranges of 4 weeks to 2 years. By increasing RT volumes and frequencies muscle mass and muscle strength could be gained.

Most activities require strong core stability in order to efficiently move through complex or different movements. There appears to be a correlation of asymmetry in muscles and dysfunction. The overall purpose of the study was to analyze the change in muscle and rotational trunk strength amongst sprinters and hurdlers. In order to measure the trunk rotations there were two main tests which were tests on "Maximal flexion-rotation strength measurement", and "Ultrasound imaging with contraction". The first test had each subject in the same position and their trunk rotational strength was measured on each oblique. The second test used ultrasound in order to measure the IO (Inferior oblique) and EO (external oblique) muscles.

Amongst all the participants there was an imbalance amongst all of their obliques and their right internal oblique. The external oblique showed less of an asymmetry versus the internal oblique when they were tested for rotational strength. Even though hurdlers were expected to

have an asymmetry in the obliques it was found shocking that sprinters still had a noticeable imbalance in the obliques. Even though a symmetrical event seems as if there wouldn't be an imbalance there shockingly was a noticeable difference in their rotational trunk strength to the right.

There are two important types of equipment that many gym users encounter when working out. There is the free weight which is the classic dumbbell and barbell. Then there are also resistance machines that help the user target a certain muscle group. Free weights allows for movement throughout multiple planes which requires activation in other stabilizing muscles rather than just the main focused muscle group. The overall purpose of the study was to compare the vascular responses to free weight and machine exercises. The data supports that there is less of a risk to cardiovascular health in machine exercises and also suggests that there is less of a risk in injury.

Analysis of Research

Resistance training is beneficial for muscle growth, but the wrong type of exercise can create an imbalance in the muscle. Muscle hypertrophy can be stimulated by a high amount of resistance training with either great amounts of resistance or great amounts of repetitions. One way muscle hypertrophy can be activated by doing a certain routine or exercise for long periods of time. However if it is not repeated equally muscle asymmetry can develop. This was seen as an issue in hurdle runners and in order to combat this muscle asymmetry they could use resistance training to tighten the gap between the asymmetrical strengths. There are different types of resistance training that can help with muscle imbalances. Users can either use free weights or

machines in order to help their muscles reach a point of symmetry. When it comes to health and activation, free weights would be the best option for muscle stabilization and balance. This would help the athlete have more symmetrical muscles with good stability and balance.

Conclusion

Lifting weights is widely known to be a great way to exercise. When someone lifts weights they are breaking down muscle fibers so your body rebuilds them to become stronger. The optimal amount of repetitions that should be performed ranges based on training style. It should be closer to 10 for muscular endurance and closer to 5 for strength. A muscle that will be focused on is the oblique. It is a muscle group that people seem to have lots of confusion over. Many players in the MLB don't know whether they are doing too much, too little, or the wrong exercises for their obliques. Resistance training is a method that can be used in order to improve muscle strength and endurance. Two categories of resistance training include equalized total training volume and unequalized total training volume. A strong core is important for people and their everyday activities. A common issue in hurdlers was muscular asymmetry in the obliques. One oblique appeared to provide greater strength over the other and most of the time it was the right oblique that was stronger. Free weight training is better for muscular stabilization and balance. Another form of lifting is by using machines but this mainly benefits beginners in order to get them to workout the main muscle group.

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