

RECOMMENDATIONS FOR A BALANCED WORKOUT IN ABDOMINAL TRAINING

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Abstract: A balanced workout incorporates abdominals, hip flexors and hip extensors. Therefore, it is important to identify which exercises are appropriate for each muscle group and include all three in a Physical Training program. A PT program should also incorporate a flexibility program in order to prevent the exercised muscles from becoming too tight.

Keywords: Balanced, workout, abdominals, hip flexors, hip extensors, training.

INTRODUCTION

Many exercises, performed to strengthen the abdominal muscles, are actually exercises for the hip flexors (muscles that move the hips and legs toward the chest). This causes over-development of the hip flexors and under-development of the abdominals. Although both, hip flexor and abdominal strength is necessary for operational performance, over-developed hip flexors play a significant role in the development of lower back problems. Over-developed hip flexors not only change the curvature of the spine, but also stress the front portion of the vertebral discs. Hip flexor strength is necessary, but it should be balanced with equally developed and flexibility in the hip extensors (muscles which move the legs away from the chest) and abdominals.

CONTENT

A balanced workout incorporates abdominals, hip flexors and hip extensors. Therefore, it is important to identify which exercises are appropriate for each muscle group (abdominals, hip flexors, hip extensors) and include all three in a Physical Training program. A PT program should also incorporate a flexibility program in order to prevent the exercised muscles from becoming too tight.

Exercises that anchor or elevate the legs and feet off the deck are actually working the hip flexors. When performing these types of exercises, the torso and upper abdominals act to stabilize the pelvis during the movement. For this reason it is suggested that hip flexor exercises be performed first. Exercising the abdominals first causes them to become fatigued and therefore unable to stabilize the pelvis. The following recommendations will strengthen the abdominals:

- Identify exercises which are true abdominal exercises versus those which work the hip flexors;
- Decrease the number of hip flexor exercises performed to two sessions per week with fewer repetitions per session;
- Increase the number of true abdominal exercises (e.g. crunches, elbow to knee/cross over, hip rollers, side flex). Abdominal exercises can be performed daily or as limited by muscle soreness;
- Add hip exercises (e.g. prone back extension, the superman, donkey kicks);
- Incorporate a total body flexibility program into special training and include stretches for the hip flexors, abdominals and hamstrings;
- Focus on proper technique as incorporated below.

The following suggestions should decrease mechanical stress on the low back during hip flexor exercises:

- Keeping one foot on the deck minimizes the stress placed on the lower back and spine. Many exercises that require both legs to be off the deck simultaneously can be modified so that one foot is constantly on the deck supporting the low back;
- Placing a fist under the lower part of the buttocks helps to keep the spine in a neutral position;

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- Lifting the head and slightly rolling the shoulders helps maintain the position of the spine;
- Performing hip flexor exercises prior to abdominal exercises;

RECOMMENDATIONS FOR SIT-UPS

In recent years, the sit-up technique has undergone many modifications. Because sit-ups compose a large portion of the training program, some specific comments regarding their proper use are crucial. When performing sit-ups, the preferred technique is to bend the legs at the hips (at 45°) with the feet flat on the deck shoulder width apart. Legs should be slightly abducted (turned outward). If hands are placed behind the head, care should be taken not to force the neck into flexion. The fingertips of the hands should just barely touch the back of the head. Elbows should remain back at all times. Concentration on using the abdominals (not the head) to pull through the movement is essential. Keeping the eyes focused on the ceiling helps prevent neck strain and isolate the abdominals. Lifting the torso until the shoulder blades come off the floor engages the majority of the abdominal musculature. Lifting the torso further off the deck will safely engage the internal oblique and the hip flexors, if that is the goal. When first performing the sit-up from an extension position you may not be able to perform as many repetitions. This should not be surprising since essentially, you have been performing only half a sit-up in the past.

THE FOCUS SHOULD BE ON THE QUALITY, NOT THE QUANTITY OF SIT-UPS

The same principals that govern the muscle strength-endurance continuum apply to the abdominal musculature. The muscular fitness component you will develop (i.e. strength vs. endurance) is determined by the number of sit-ups performed using a towel or “Ab. Mat” beginning with 15° of extension.

If muscle strength is the goal, you may want to move to 30° extension. Once you are performing over 15 reps per set at 30° extension, you can increase the difficulty of the exercise by changing the position of the arms, adding weight, or performing sit-ups on a decline. If the goal is to develop the muscle strength, enough resistance should be added to keep the repetitions per set below 15. Once there is a sufficient foundation of the muscle strength, muscle endurance can be developed. As with exercises, when muscle endurance is the goal, enough weight should be added to keep the repetitions between 15-50 per set. These principals apply to other types of sit-ups as well (i.e. crunches, vee-ups, cross-over)

CONCLUSIONS

- A balanced workout incorporates abdominals, hip flexors and hip extensors.
- Proper technique is important when performing all exercises.
- Hip flexor exercises be performed first.