

## Work Those Abs

February is a training month. A training month I hope you find motivational and educational. We begin with a muscle. Not just any muscle, but the **ABDOMINAL MUSCLE**. Why? Good question. It has nothing to do with the fact that the abdominals in one way or another support a majority of the weight of the body. Nor does it involve understanding the role your abdominal muscles play during breathing. It doesn't even deal with the idea the mid-section is directly related to fat storage. So what is it you ask? Well, stick around and find out all.

Muscles contract and relax. They shorten to perform work and lengthen or return to normal upon relaxation. Muscles work daily supporting the many vital bone structures while protecting organs and other bodily tissues. They serve as a storage bin for glucose (sugar) that in turn is readily converted to energy for movement. No secret here, muscular work requires energy, such energy is directly derived from the foods we consume. Those foods are biochemically broken down into their chemical bonds of protein, carbohydrate, and fat chains. From there each is converted and utilized in the various parts of the body (muscle and tissue repair, sugar to the brain, etc. ...)

Not to get too far off track, back to muscle and thinking of the abdominals. **Soft, fat covered, out-of-shape abdominals do little to support the spine or protect your internal organs, let alone stores enough readily needed energy for performance.** You see, the more quality muscle maintained, the more energy available for (glucose) storage. Therefore, it is in our best interest to strengthen the abdominal muscles propelling your bowling as well as:

1. **Develop a more aesthetically pleasing physique.**
2. **Protect the internal organs.**
3. **Assist in the digestive processes.**
4. **Increase storage and use of energy during activity.**

### View the Sights

The abdominal wall, a single sheath of muscle, consists of multiple portions of the muscle attached and separated via tendons and other tissues. The **Rectus Abdominus** originates on the **Pubic Crest** and to **Inguinal Ligament** inserting on the **Costal Cartilage** ribs 5, 6, and 7. The abdominal wall (**A**), takes the shape of six blocks of muscle aligned in two parallel rows of three. Each contract simultaneously working together in a collaborative effort to flex and bend the trunk forward. Ironically, the rectus abdominus only flex the trunk 30 degrees in a range of motion. This is largely unknown to most beginning and many other exercisers who believe full range sit-ups exclusively work the abdominals. WRONGO.

The abdominals are duly supported by the internal and external obliques. External obliques are most prominent on a well defined mid-section at the sides of the abdomen (**B**). The lesser visual and known internal obliques rest inferior (below) to the abdominals (**C**). Both set of obliques work to assist the abdominals with trunk flexion, but mainly produces rotation and lateral flexion at the waste.

### Training those Abs

**Exercising the rectus abdominus and internal and external obliques are actually quite simple requiring no specific apparatus.** It is vitally important to understand exercise training principles and theories before jumping onto the floor and into the routine. In our case with the abdominals, we will use a combination of gravity and body weight to be the resistance factor stressing the muscles, fatiguing their energy stores, ultimately promoting growth and adaptation. Many experts agree that training the abdominals nearly every other day provides substantial recuperation time. I tend to agree with such philosophy. Therefore, the group consensus is to hit the floor on alternating days exercising the mid-section using only body weight as the resistance factor.

The next concern deals with duration or amount of time spent exercising. Well, let me be the first to tell you it's probably a lot easier than often thought. Each exercise should be performed slowly and methodically. Secondly, execute both exercises within your limits. What's that mean? The first several occasions you exercise, do each movement within your personal limit not exceeding 20 repetitions. That's right, no thousand sit-ups a day. Just slow, methodically training within your individual limits. Stay within your limits. Take your time and learn the movements using the diagrams and the verbal cues feeling the abdominals and obliques squeezing while pulling your torso off the floor only 30 degrees.

**Abdominal Curl** - lie in standard bent-knee sit-up position (**D**), and while exhaling, very slowly raise the shoulders and upper back off the ground (**E**). Keep the lower back in constant contact with the floor throughout the movement. Hold the

curl for one or two seconds in the completely contracted position, then slowly return to the floor. Note: keep the arms at the side of the body on the floor completely lifeless while relaxing the neck by viewing the ceiling the entire time.

**Rotational Abdominal Curls** - lie in standard bent-knee sit-up position (**F**), and while exhaling, very slowly raise the shoulders and upper back off the ground rotating to one side (**G**). Keep the lower back in constant contact with the floor throughout the movement. Hold the rotated curl for one or two seconds in the completely contracted position, then slowly return to the floor. Rotate to the opposite side and count both as a single repetition. Note: keep the arms at the side of the body on the floor completely lifeless while relaxing the neck by viewing the ceiling the entire time.

### **Hints to Successful Abdominal Training\***

- Place padding or a mat under the body (especially lower back) for support.
- If the mat is still uncomfortable on the floor, then try my favorite - do these exercises in bed. The bed provides ample cushioning and adjusts accordingly with the body.
- Squeeze the peak contraction at the top of the movement for an extra second or two.
- Slow contraction and relaxation of the movement is optimal for safe and effective exercise.

I concur with the experts who agree training the abdominals slowly on alternate days is substantial for development. Set a goal for yourself consistently hitting the floor every other day spending a few countless seconds doing your abdominal curls and rotational curls. There is no substitute to consistency accompanying effort. These can be done anytime of the day without the need for apparatus, music, or an artificial resistance factor. So what is your excuse?

**\*Before beginning any exercise program always consult your medical provider.**