

Bodies in Motion

TOTAL HEALTH CENTER NEWS LETTER

"Expert Care with Caring Hands"

Volume 13

Total Health Center is a full service physical/occupational therapy clinic where expert patient care is our first priority. We treat a full range of orthopedic and neurologic conditions. Our clinic has therapists with advanced training and specialist certifications. Our goal is to help you, the patient, reach your full potential.

Core Strengthening

Core strengthening has become a major trend in rehabilitation and fitness industries. The term core strengthening has become a catch phrase but many people are not sure what makes up their core or how to properly strengthen it. Without this knowledge, many people resort to the old standard to doing sit ups or crunches in hopes of blasting that stubborn belly bulge. This is not an effective plan.

Let us first get an idea of what the "core" is. The core can be thought of a box with the abdominals in front, paraspinals (muscles running along the spine) and gluteals in the back, the diaphragm as the roof and the pelvic floor and hip girdle as the bottom. These muscles must all be conditioned to gain a strong core. The order in which the muscles fire is also key to the core functioning properly. The spine itself, without muscular involvement is unable to bear much of a compressive load. Active support is achieved through co-contraction of the core muscles.

The coordination of muscle firing of the core is important for providing both stability and movement. One abdominal muscle called the Transverse Abdominus (TA) has been identified as a key component and it is not strengthened by doing crunches. With contraction of the TA, the front of the core is activated and as a result there is co-contraction of the lumbar muscles (Multifidi) activating the back of the core. Pelvic floor muscles also co-contrast with the TA activating the core from the bottom. The diaphragm contracting increases intra-abdominal pressure activating the roof of the core.

There are 4 abdominal muscles. They include the Transversus abdominus, External and Internal Obliques, and the Rectus Abdominus. Much research in recent years has focused on the role of the TA. It has been found to be the primary factor in stability of the lumbar spine and pelvis. In particular, it aides in the sequencing of muscle firing patterns in the lumbosacral musculature. The TA's action is to provide a hoop like stress with contraction which supports the abdominal organs. TA muscle contraction should help flatten the stomach. It also provides functional stability to the lumbar spine and pelvis.

In cases of injury or child birth, core muscles are often inhibited. Inhibited abdominal muscles are weak, lax and unable to support the optimal posture. Individuals with inhibited abdominal muscles typically work hard on their abdominal muscles but don't notice positive changes. Over working an inhibited muscle may cause pain in other areas such as the lower back. It is important to first re-activate the inhibited core muscles before attempting to strengthen them. A trained physical therapist can assess the effectiveness of core muscle activation. Once a person learns to engage their core muscles more difficult positioning and movements can be added to enhance an exercise program.

Doing crunches activates mainly the Rectus Abdominus which is the large muscle on the front of the abdomen that gives the "six-pack" appearance. Exercising this muscle will not flatten the stomach and may in fact increase bulging. During our daily lives our abdominal muscles do not function to pull our trunk forward (like with crunches). They have a greater

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Fridays 7am-4pm



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Healthy Recipe of the Month

California Burger

3 tbsp ketchup
2 tbsp mayonnaise
2 tsp sweet pickle relish
1 tsp Dijon mustard
1 lb. ground sirloin
1/8 tsp salt
1/8 tsp pepper
Cooking spray
4 (1oz) slices reduced-fat lower sodium swiss cheese
4 green leaf lettuce leaves
4 hamburger buns
4 slices red onion
8 slices tomato
1/2 ripe peeled avocado, cut into 1/8 inch slices
8 bread and butter pickle chips
Combine first 4 ingredients in a bowl. Divide beef into 4 equal portions shaping into 1/2 inch patty. Press a nickel-sized indentation in the center of each patty; sprinkle patties evenly with salt, pepper. Heat large skillet or grill pan over medium-high heat. Coat pan with cooking

role in preventing our trunk from falling backward. This being said, it only makes sense to work our abdominals as a trunk stabilizer rather than trying to work them by flexing our trunk against gravity.

The "roof" of our core muscles, the diaphragm can be activated during exercise by adding deep breathing with our muscle contractions. Pelvic floor and hip exercises should be included in a core exercise program to strengthen the floor or bottom of our core muscles.

There are a multitude of exercises that are effective for core training and one such exercise will be covered in the exercise of the month below. A presentation will also be given, (see information below) by the therapists at Total Health Center to further your knowledge of the subject for all who are interested.

Exercise of the Month

Plank position

The plank is a fundamental exercise to introduce people to their core muscles. It can be done in 4 positions:

On stomach: lie on your stomach with elbow propped under your body. Tuck the toes under to assume a push up position on the forearms. Keep the body flat, do not lift the buttocks into the air.



On the both sides: roll onto on side, stack your feet or stagger the feet (makes exercise easier), press up onto the forearm and lift the hips off the ground. Keep the hip lifted and don't sink in to the weight bearing shoulder.



On the back: lie on your back, press upward into the forearms, maintain without sinking into the shoulders or dropping the hips.



Progress this exercise by superimposing upper or lower extremity movement in any of the positions.

spray. Add patties to pan; cook 3 min on each side. Top each patty with 1 cheese slice; cook 2 minutes or until desired degree of doneness. Place 1 leaf lettuce on bottom half of each bun; top with 1 patty, 1 onion slice, 2 tomato slices, 2 avocado slices, 2 pickle chips, 1 ½ tbsp. sauce and top ½ of bun
389 calories, 38 g protein

Patient Testimonials

Successful yet again. Throughout the adventure with my knee, this clinic has been the most successful and enjoyable part of my recovery. - Tracy

I am very happy with my treatment and surprised at how quickly my pain was decreased. The whole unit has a positive happy approach- giving confidence. - Juanita

Everyone here at THC is absolutely very personable, friendly, and caring. I have friends here. I am going to miss them all. They were also very knowledgeable and met all of my needs. - Sally