



## Core Stability for a Healthy Back

By Brad Walker

Core stability deals with the proper coordination of the key muscles used to support the spinal column in its natural-curve. Core stability is the coordinated effort of the deep muscles of the trunk, pelvis, hips, abdominal muscles and small muscles along the spinal column. These muscles contract together to create force used to hold the spinal column in alignment. The strength of these muscles is less important than their endurance and the co-contraction of the muscles to provide support. Since these muscles must stabilize the spinal column during all movement they must have good endurance with enough strength to counter forces placed on them during extreme activities. The muscles must be equal in strength and contract in correct proportions to maintain the proper posture of the spine during all activities.

### Muscles Involved

The deep muscles of the trunk and hip region are involved in core stability. The

transverses abdominus (TA), the multifidus (MF), internal oblique (IO), paraspinal, and the muscles of the pelvic floor are all essential for core stability. The contraction of these muscles increases the force along the theracolumbar fascia that covers the spinal column. Intra-abdominal pressure increases as well, increasing support to the lumbar spine. It has been shown that the TA and MF contract simultaneously when movement of the limbs is anticipated. This stabilizes the spine and creates a solid base for all movement.

### Improve Your Core Stability

It is important to differentiate between core strengthening and core stability. Core stability deals with the ability to stabilize the spinal column during all movements. This does not pertain to the strength of the muscles or force of their contraction. The muscles involved are also different. Core strength deals with the superficial muscles of the core; the abdominals, the gluteals, adductors, abductors, the spinal erectors and other trunk and hip mus-

cles. Core stability deals with the deeper trunk and hip muscles. Improving core stability requires working the muscles in their specific function. These muscles are stabilizer muscles and therefore contract with a static or isometric contraction. They do not move, which means they must be worked with static exercises. These muscles are under static stress all day long, as long as a person is standing or moving. This requires a high degree of endurance, along with adequate strength to handle sport or fitness-related movements. The exercises must stress endurance under increasing workloads to focus on gradual strengthening of the muscles while enhancing endurance. Finally, the muscles must be worked in their correct anatomical position. The spine has a natural S-curve that is designed to absorb the most shock and hold the body in correct alignment. Exercises for core stability must place the spine in its neutral position to ensure adequate involvement of all the muscles.

### Precautions

When exercising to improve core stabilization it is essential that activities be done in correct alignment. It is also important that all the muscles be recruited together and in correct proportions. Starting with static exercises to work the endurance of the muscles in a controlled environment is a safe way to start building stability. Gradually increase the difficulty with other joint and muscle involvement, as your comfort level increases, thereby working dynamic core stability.

### Beginning Exercises

Core stability starts with recruiting the TA and MF muscles and you can train your body to do this by a technique called *Hollowing*. To do this you lie on your back on the floor with your knees bent. There should be a natural space between your lumbar region and the floor. Then you breathe in deeply while relaxing your abdominal muscles. Breathe out while pulling your navel back toward your spine. Hold the contraction for 10 seconds,

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## When to Eat Organic Produce

By Jen Zalta

According to the USDA and the newly revised Dietary Guidelines Food Pyramid the average active adult (30 minutes of moderate activity each day) needs 1,800 to 2,000 calories per day and is told to consume a minimum of 2.5 cups vegetables, 1.5 cups fruit and 3 cups of low-fat or non-fat dairy each

day for optimal health. Individuals with higher activity levels may require 3,000 or more calories per day and are recommended to consume at least 4 cups of veggies, 2.5 cups of fruit and 3 cups of low fat or non-fat dairy.

To help you decide between the organic and the conventionally grown produce when

filling up your grocery cart consider the following.

### Nutrient Content

Many of America's conventionally grown fruits and veggies now contain less of the six key nutrients- protein, calcium, vitamin C, riboflavin (vitamin B-2), phosphorus and iron- than they did 50 years ago.

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## Mindfulness: Making it Happen

### Pursue Your Dreams



There are times in our lives when all the signs seem to be pointing us in a particular direction. Our thoughts and dreams are echoed in the songs and stories we hear and the media we see. Maybe the message we are getting from the universe doesn't even make sense in the "real" world, but somewhere inside, these urges feel right. Maybe you feel you are being told to move to a new city although your life where you are is just fine. Or maybe you feel the desire to pursue a new direction in your career when it never really interested you before. When we spend time getting in touch with our higher

self, our intuition sends us directives to lead us to become our best and most fulfilled selves. And when we are open and listening, the next step is to take action and go for it.

Once we make the decision to pursue our inner urgings, the universe sets into motion the means for all sorts of details to fall into place. A sense of peace will come over us, because we know that any questions will no longer make us wonder if our dreams are possible, but how to make them happen. Instead of deterring us from our goal, these questions only serve to clarify our focus to move us forward. We need not throw

caution to the wind to follow our dream. The positive shift in our energy affects everything around us. Like a rush of water, it goes ahead to clear debris from our path so that we can go forward. Our new attitude also attracts like-minded people. Sometimes even the most unlikely angels arrive to help us along our way with the information and support we need.

Wherever your dreams are pointing you today, take a step. Take action and manifest your dreams.

## Food For Thought: Contemporary Comfort Food

### Black Bean Enchiladas with Warm Salsa Verde

#### Enchiladas

8 soft corn tortillas  
1 recipe Black Bean Filling  
1 recipe Warm Salsa Verde  
10 1/2 oz. grated Mexican cheeses

#### Black Bean Filling

1 Tbs. extra virgin olive oil  
2 cloves garlic, minced  
1 small white onion  
1 jalapeño, seeded and minced  
2 15-oz. cans black beans, drained but not rinsed  
1 tsp. ground cumin

2 Tbs. tomato paste  
Coarse salt to taste

#### Warm Salsa Verde

12 tomatillos, husked and halved  
2 cloves garlic, minced  
1 Tbs. extra virgin olive oil  
1 small white onion, grated or minced  
1 jalapeño, seeded and minced  
1 14-oz. can vegetable stock  
1 tsp. ground cumin  
Coarse salt to taste  
1 ripe avocado



**Enchiladas:** Wrap tortillas in aluminum foil, and heat in oven at 275F until fillings and sauce are ready.

**Black Bean Filling:** Heat oil in large skillet, and add garlic. Add onion and jalapeño. Cook for 1 to 2 minutes. Add beans, and mash with back of a fork. Stir in cumin and tomato paste, and season with salt.

**Warm Salsa Verde:** Place tomatillos in a food processor, and pulse to a coarsely ground paste. Heat garlic in oil over medium heat in a large saucepan. When garlic begins to sizzle, add onion and jalapeño. Heat for 1 to 2 minutes, and then add ground tomatillos. Simmer tomatillos with onion for 5 minutes. Add stock and seasonings. Add mashed avocado and stir into sauce until thickened. Return sauce to a gentle boil. Reduce heat to warm until enchiladas are assembled. Preheat broiler. Scoop some sauce onto bottom of a casserole dish. To make an enchilada, place 1 to 2 scoops of filling down center of a tortilla, and roll. Place filled tortillas seam side down into sauce on casserole. Line up tortillas, one next to another, and top with remaining sauce and grated cheeses. Melt cheeses under broiler, and serve immediately.

Serves 4.

#### Wine Suggestions

*A traditional Spanish Rioja would be an excellent match for this spicy, flavorful dish. Consider the well-known Marques de Murrieta, with its smoky flavor—a perfect match.*

## Organic Produce...

Today crops are grown to produce larger fruit in a shorter period of time and are harvested before the fruit has ripened for ease of transport. The result is that plants do not have time to acquire these key nutrients from the soil or to create them from sunlight.

Reports have shown that organic foods have 30% percent higher antioxidant levels then compared to conventionally grown foods. *The Journal of Applied Nutrition* reports organic produce has higher levels of selenium (known for cancer prevention and reduces risk of heart disease), chromium (decreases plaque build up in arteries), calcium, and magnesium.

### Heavy Metal Contamination

Ingestion of heavy metals has been linked to many health risks. Organic produce has far lower concentrations of these potentially harmful heavy metals than conventionally grown food. Concentrations of aluminum (linked to the development of Alzheimer's disease)

are 40% lower in organic fruits and vegetables. Lead, a known toxin especially for children, is 29% lower in organically grown food. Mercury, which can lead to neurological damage and has scared people away from eating certain kinds of fish, is found to be 25% lower in organic foods.

### Pesticide Residues

The EPA has listed 60% of all weed killers (herbicides), 90% of all mold killers (fungicides) and 30% of all insect killers (insecticides) as potential cancer-causing agents. While chemicals such as DDT have been banned from use as mosquito repellents it is still used on our food supply. Once eaten pesticides can be found stored in our body fat long after we consume them. Herbicides and pesticides used on conventionally grown produce can decrease the plant ability to produce phenolics (ie flavonoids and tannins), which are vital antioxidants for humans.

The Environmental Working Group ([www.ewg.org](http://www.ewg.org)) calculated consumer exposure to harmful pesticides based on fruit and vegetable consumption. It reports that an individ-

ual can reduce their exposure to total pesticide intake by 90% by simply avoiding the "Dirty Dozen" conventionally grown foods. See table below.

### The Bottom Line

Buying organic can be more expensive than purchasing conventionally grown produce and it is difficult to find all the variety we enjoy especially in a place like Jackson. By avoiding the top 12 consistently most contaminated conventionally grown produce you are significantly reducing your exposure levels and choose organic dairy, which is free from hormone additives.

There are several local organic farms in our area that offer community food shares. This is a great opportunity to purchase organic produce, dairy and eggs and support local organic farming. To find out more about Community Supported Organic Farming please call: *Cosmic Apple* 208-787-2082; *Blue Flax Farms* at 307-413-3203; *EverGreen Farm* 307-884-6423.

The 12 Most Contaminated. Always buy these **ORGANIC**

Apples	Peaches
Bell Peppers	Pears
Celery	Potatoes
Cherries	Red Raspberries
Imported Grapes	Spinach
Nectarines	Strawberries

The 12 Least Contaminated. Buy Organic or Conventional

Asparagus	Kiwi
Avocados	Onions
Broccoli	Mangos
Bananas	Papayas
Cauliflower	Pineapples
Sweet Corn	Sweet Peas

## Core Stability...

staying relaxed and allowing yourself to breathe in and out while holding the tension. Repeat this for 5 to 10 repetitions. Once you can accomplish this activity successfully you can progress to more dynamic exercises.

### Body Weight Exercises

These exercises can be either static or dynamic, meaning holding a contraction without movement or moving through a range of motion while stabilizing the core.

A static bodyweight exercise might look like the *Side Plank*. To perform this exercise you lie on one side, keeping the top and bottom hips in alignment. The top arm is resting on your side and the bottom arm is bent at the elbow, forearm on the floor, and the elbow directly under the shoulder. This arm braces the torso. Push up so there is a straight line through

the feet, hips and head. Hold the position and then slowly lower to the start. Gradually increase the time of the hold (working toward a 30 second hold) and repeat for 2 to 3 repetitions on each side.

For a dynamic bodyweight exercise you might try the *straight leg raise*. Lie on your back with your knees bent. Make sure your spine is in a neutral position and contract your abdominals for stability. Lift one leg straight in the air, making sure your spinal alignment does not change. Then lift the other leg straight up as well. Lower one leg slowly toward the floor. Only move down until you feel your back move (placing your fingers in the lumbar space may help to feel this at first.) Keeping the abdominals tight, slowly bring the leg back up and repeat with the other leg. Perform 2 to 3 sets of 8 to 10 repetitions, alternating legs during each set.

### Swiss Ball Exercises

The Swiss Ball adds an extra dimension to core stability training by adding the balance element. As with bodyweight exercises, these exercises come in static or dynamic varieties as well.

A good example of a static Swiss Ball exercise is the *Gluteal Bridge*. To perform



this you place your head and shoulders on top of the Swiss Ball with your feet on the floor. Feet should be hip-width apart for stability. Slowly lift the hips, using the muscles of the hips and spinal column, until there is a straight line through the knees, hips and shoulders. Do not raise the hips too high



or allow the ribs to flare, causing hyperextension of the back. Hold for 30 seconds and repeat for 2 to 3 repetitions.

*Overhead Pulls* are a good dynamic Swiss Ball exercise. Place your shins on the Swiss Ball and your hands on the floor under your shoulders in the push-up position. Set the lumbar spine in a neutral position and make sure the shoulders are stable by pulling the shoulder blades down and the chest out. Roll your legs backward over the ball, maintaining a straight body position and good spinal alignment, until your arms are overhead. Continue to brace the abdominals and pull yourself back to the beginning position. Do 2 to 3 sets of 5 to 10 repetitions.

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## A Pain in the Neck: Upper Crossed Syndrome

By Jen Zalta

Many of us suffer from nagging pain and tension in our necks and upper backs. When asked where it hurts we sweep our hands over the tops of our shoulders and between our shoulder blades.



Physician and clinical researcher Vladimir Yanda coined the term "Upper Crossed Syndrome" to help us understand the structures involved and the postures that predicate our pain and tension.

Yanda discovered that certain muscles tighten while others weaken when exposed to the same stressors or postures. His research revealed that the slow twitch fatigue resistant *postural* muscles of the upper back and neck become neurologically shortened and tight while the dynamic

fast twitch *phasic* muscles supporting the neck become stretched and weakened. This muscle imbalance creates an "X" (when viewed from the side) at the junction where the cervical vertebrae of the neck transition into the thoracic vertebrae of the trunk. The Tight Line "\/" passes through the upper trapezius, levator scapula, and pectorals causing



### UPPER CROSSED SYNDROME

- A) Tight Line
- B) Weak Line

Note the forward head posture; hyperextension of the neck and excessive kyphosis of the thoracic spine that results from the unbalanced pull of short tight vs. weak stretched muscles.

the shoulders to elevate and roll forward. The Weak Line "/" crosses through the neck flexors and the lower shoulder stabilizers (rhomboids and lower trapezius) are unable to counter the pull of the short facilitated postural muscles.

In our flexion addicted culture, three common postures are revealed in the Upper Crossed Syndrome, which result in neck and upper back pain. First, the shoulders roll forward on the rib cage, pulled by tight short pectoralis muscles. Second, the neck slumps forward on the thorax, so when viewed from the side the ears are forward of the mid-line of the body. Third, the head becomes hyper-extended on the neck when the suboccipital muscles at the base of our skull are recruited to help level the eyes so we aren't staring at the ground.

The goal is then to create balance between the short tight postural muscles and the stretched weak phasic muscles

to alleviate pain and tension. Massage, myofascial release and assisted stretching are indicated for the short muscles. While restoration of contractibility and strengthening is required for weak stretched muscles. Massage, home exercises and an awareness of postural habits will all help to restore muscle symmetry and balance and reduce neck pain.



For more information on how massage can help reduce your neck and upper back pain or to schedule an appointment please call 307-690-8228 or visit [www.PeakBodywork.com](http://www.PeakBodywork.com)