



Posture & Core

Conditioning



by David Grisaffi

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Posture and Core Conditioning

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Contents

1. The Importance of Posture	1
Core Stabilization and Strength	1
The Benefits of Weight Training	2
2. The Inner Unit	3
Muscles of the Inner Unit	3
Exercises to Improve the Inner Unit	5
4-Point Transversus Abdominis Tuck	6
Horse Stance Vertical	7
Heel Slides	8
3. The Outer Unit	11
The Inner Unit and the Sling Systems	11
The Basis for an Outer Unit Exercise Program	11
Alternating Dumbbell Press on Swiss Ball	13
Lunge—Static and Dynamic	14
Bent-over Rows	16
Chek Press (Modified Arnold Press)	17
4. Posture	19
What Is Posture?	19
Why Good Posture Is Important	19
Prone Cobra	21
Axial Extension Trainer	22
Wall Leans	23
Cervical Flexors with a Blood Pressure Cuff	24
5. Basic Core Conditioning	25
What Is Posture?	25
Reverse Crunch on Floor (Lower Abdominals)	27
Horizontal Woodchopper (Internal and External Obliques)	28
Supine Lateral Ball Roll	29
Floor Crunch	30
Firm and Flatten Your Abs by David Grisaffi	33





The Importance of Posture

VIRTUALLY EVERYONE—young and old, male or female—has a deep desire to improve his or her life. However, many people have orthopedic problems that prevent them from improving their bodies. These problems occur from a lack of core stabilization and strength, leading to poor posture.

Our bodies were designed to withstand many environmental conditions. The ability to stabilize our core musculature is vital to our existence. Our ancient ancestors could not afford to have back pain. They needed to function on a basic level that involved moving rocks, building shelter, climbing mountains, or running after food. If they had a bad back or poor core stabilization and strength, their likelihood of survival would have been deeply diminished.

Core Stabilization and Strength

Our core musculature contributes to vital functions within our bodies and enables us to perform simple to complex tasks. Without good control or stabilization and a thorough understanding of what contributes to core stabilization and strength, we can fall prey to many of modern society's ailments. Lower back pain is the number one patient complaint in America.

Many problems and orthopedic injuries result from poor core stabilization and strength. Females appear to be at a higher risk

of suffering such injuries. Jame Zachazewki shows evidence of this in a study he conducted in 1996. He discovered that women have a lack of strength in the lower abdominals and pelvic floor muscles. He explained that 47% of females age 38 and above suffer from incontinence. However, women who participated in a regular weight-training program reduced the incidence of incontinence to only 4%.

The Benefits of Weight Training

A weight-training program enables the body to communicate better and increase strength and stabilization. Elderly women can further benefit from a weight training program, which can improve balance, increase muscle mass, influence bone density (combating osteoporosis), and help to manage osteoarthritis.

Note: If you would like more information on how weight training and core conditioning aid older, adolescent, and pregnant or postpartum women, email me at david@fit-zone.com.

We first must look at the functional anatomy of our core musculature. We need to understand the benefits that a good core conditioning program can have on our livelihood. A core conditioning program will decrease the likelihood of back and neck pain, incontinence, ruptured disks, muscle and ligament strains, all while improving posture.

To begin understanding the complexity of our core and how it relates to overall function, we must address the inner and outer unit and how they work in harmony allowing us to function at a higher level.

A simple and brief anatomy lesson should help you understand how these units work. The muscles involved are broken down into separate but interconnected inner and outer units. The inner unit is the topic of the next chapter.

2

The Inner Unit

THE INNER UNIT provides the necessary joint stabilization for the spine. If the inner unit does not activate properly, our spine, pelvis, and joint structures are placed under undue stress. This stress creates an atmosphere that leads to many orthopedic injuries.

Muscles of the Inner Unit

I first learned about the inner unit while reading research by Richardson, Jull, Hodges, and Hides. After reading *The Pelvic Girdle* by Diana Lee and articles by Paul Chek, I came to understand that the basic inner unit consists of the following four muscles:

- Transverse abdominis
- Multifidus
- Pelvic floor
- Diaphragm

This research shows that the inner unit operates on a different neurological loop from other core muscles. The actual anatomy where these muscles attach is not the theme of this article; however, you should have a good idea where these muscles are and what they do.

Transverse Abdominis

The *transverse abdominis* (TV) is the deepest, innermost layer of all abdominal muscles. Consider the TV as your body's personal weight belt. When the TV contracts it causes hoop tension around your midsection like a girdle or corset. The transverse abdominis will, if working properly, contract before the extremities move, according to Diana Lee. If this muscle does not tighten up, acting as a girdle around your waist, your spine and pelvis are at higher risk of injury.

If the spine is unstable the nervous system will not recruit the extremity muscles efficiently and assist with functional movement correctly. For example, if you bend over to pick up the laundry basket and your transverse abdominis does not activate properly, this leads to all stabilization occurring at the segmental (one-joint) level. This stress eventually leads to overload of the segmental stabilizers and—POW! You have massive lower back pain. This occurs because the segments of your spine tighten down but the gross stabilizer (transverse abdominis) does not leave the segments to work on their own. They cannot provide enough muscular strength at the segmental level to withstand such a movement. Now can you imagine lifting weights, grabbing a suitcase off the conveyor belt, or reaching overhead to get down a box of heavy tapes? When the transverse abdominis does not work properly the joints will begin early degeneration, leading to many orthopedic problems.

To activate the transverse abdominis, draw your belly button up and in toward your spine. This activation should be done before bending over or reaching overhead, especially with heavy loads. A little trick is to get a string and tie it around your waist at the belly button level. Draw your abdomen up and in toward your spine as far you can, then let it out about three-quarters of the way and tie the string at that point. It should be tight, but not noticeably. If your TV relaxes and extends your abdominal wall, the string will tighten up and you will immediately get feedback.

Multifidus

The next muscle we must look at is the *multifidus*. This muscle lies deep in the spine, spanning three joint segments. The multifidus works to provide joint stabilization at each segmental level. Each vertebra needs stiffness and stability to work effectively to reduce degeneration of joint structures.

Pelvic Floor

The *pelvic floor* is our next set of muscles that spans the area underneath the pelvis. It is important for the pelvic floor and the inner unit to work properly. In many cases because of operations such as hernias, hysterectomies, and C-section childbirth, the inner unit muscles have been cut, reducing communication to the pelvic floor. By doing simple yet important exercises we can re-establish communication, tighten and tone the muscle group, prevent or diminish incontinence, leakage, and pelvic dysfunction.

Diaphragm

Each of these three muscles, plus the *diaphragm*, are the target of inner unit conditioning.

Exercises to Improve the Inner Unit

The basic exercises to improve the inner unit activation are:

- 4-point Transverse Abdominis Tuck
- Horse Stance Series
- Heel Slides

After doing inner unit exercises for a while you should notice your lower abdominal region feeling tighter and firmer.

4-Point Transversus Abdominis Tuck



This exercise is great for isolating the transversus abdominis, for correcting “pooch belly,” and reconnecting with the nervous system. It is particularly valuable for pre-surgery preparation and post-surgery rehabilitation. In surgical procedures such as caesarean section and hernia, the muscles, nerves, and tissues are cut, causing a loss of neurological impulse (your brain tries to call your muscles to wake them up, but the muscles don’t answer!). Lack of neural drive to the core muscles is one reason for the belly hanging out. Certain exercises can help reconnect the nervous and muscular systems so your “pooch belly” gets the message from the brain loud and clear and pulls those muscles in.

Note: Using a dowel rod can help you keep good neutral exercise posture and provide biofeedback. (As the rod touches different parts of your body, it makes you aware of your body position.) If you use the dowel technique, place the rod along your spine, making sure the back of your head, upper back, and tailbone are in contact with the rod.

Position: Get down on all fours as though you were going to crawl. Place your hands directly underneath your shoulders and your knees directly beneath your hips.

Movement:

1. Inhale and let the transversus abdominis hang out toward the floor.
2. Exhale, drawing the belly button in toward the spine.

Avoid any spinal movement during this exercise such as contracting the glutes, hamstrings, or external rotators.

Horse Stance Vertical



The first exercise in the Horse Stance series is the Horse Stance Vertical, which integrates the stabilizer muscles of your spinal column with the other muscles of the inner unit. It targets the inner unit (multifidus, pelvic floor, transverse abdominis, and diaphragm).

Position: Get down on all fours with your hands directly underneath your shoulders and your elbows slightly bent. Your knees should be directly beneath your hips at a 90-degree angle.

Movement:

1. Raise your left hand and right knee approximately one centimeter off the ground (that's about the thickness of a magazine—look closely at the center photograph and you will see the hand slightly off the mat. The right knee is also raised slightly off the mat, although it cannot be seen in the photograph). Hold this position for 10 seconds.
2. Repeat with the right hand and left knee.
3. Alternate back and forth until you have done the exercise for a total of 2 minutes.

To help you with proper exercise duration, use a kitchen timer.

Do not let your hamstrings flex the lower leg toward the ceiling. Ensure that your pelvis does not shift into the hip that is in contact with the ground.

Note: More advanced Horse Stance exercises are described on the Inner Unit web page at www.fit-zone.com/exercise.html.

Heel Slides



Starting Position



Extended Position



Ending Position

Note: This exercise requires a blood pressure cuff.

Heel slides are a great integration exercise for the inner unit, lower abdominals, and lower extremities (your outer unit).

Position: Lie supine (back down, face up) on the floor with your shoes off. Bend your hips and knees, placing your heels about 8 inches from the buttocks. Keep your spine in a neutral position. Place a blood pressure cuff under your lumbar spine. Pump the cuff up to 40 mm Hg and take a deep diaphragmatic breath.

Movement:

1. Slowly exhale and draw your belly button in toward your spine.
2. Slowly slide the left leg out, away from the starting position.

There should be very little movement of the blood pressure cuff needle. If the pressure on the cuff begins to increase or decrease by more than 5 mm Hg, stop the movement and slide your leg back to the beginning position. Make a note of the distance. The distance is now your ending point.

The goal is to extend your leg farther out without the blood pressure cuff changing its reading. The farther you can extend your leg, the better the integration of your inner unit and outer unit.

3. Repeat for the opposite leg.
4. Repeat for the prescribed number of reps.

Try to achieve 10 reps at a slow pace for each leg. Do not rush this exercise.

Do this exercise daily until you can alternate sliding each leg in and out, keeping the blood pressure cuff at 40 mm Hg.



The Outer Unit

The Inner Unit and the Sling Systems

THE OUTER UNIT musculature system aids in movement and function. The outer unit muscles are basically the prime movers of the core and extremities such as the internal oblique, external oblique, rectus abdominis, back, legs, shoulder girdle, and more. They each have a vital function in movement and are connected through four major “sling systems.” These slings are:

- Deep longitudinal system
- Lateral system
- Anterior oblique system
- Posterior oblique system

I brought up the sling systems so you can understand that the function of our musculature is much more complex than a simple leg extension exercise on a machine.

Note: If you want details on how the sling systems effectively contribute to functional movement patterns, email me at david@fit-zone.com.

The Basis for an Outer Unit Exercise Program

An outer unit program consists of exercises that allow for multi-joint/multi-plane activities. This issue has been forgotten or not taught at many gyms or in exercise programs. We tend to gravitate toward the new machines in the gym, performing

isolation exercises that have no carryover to everyday work situations.

Our bodies were built as a connective, cohesive unit. By isolating muscles we interfere with the basic general motor programs established millions of years ago. For example, when you do leg extensions on a machine, the number of neurological impulses through the muscle to the brain is diminished. This exercise also contributes to the lack of neurological communication between isolated muscles (in this case, the quadriceps) and the other muscle groups.

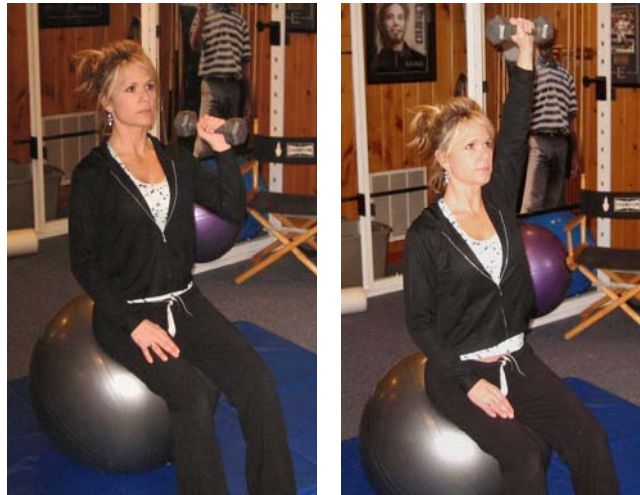
I'm not saying that leg extensions on a machine are always wrong; there are times in a rehabilitation situation, bodybuilding, and a beginning weight training program where these exercises are appropriate. Once a neurological and muscular base has been established, however, we must move on to integrate all the muscles that surround the knee joint, hip joint, pelvis, core, and lower extremities. We need to establish a fully functional dynamic muscular system.

Some of the exercises I prescribe for the outer unit are:

- Alternating Dumbbell Bench Press on Swiss Ball
- Multi-directional Lunge
- Bent-over Rows
- Chek Press

These are by no means the only exercises for the outer unit.

Alternating Dumbbell Press on Swiss Ball



This exercise challenges the entire muscular system.

Position: To perform this exercise, grip dumbbells of a weight that will allow you to do 8–10 repetitions. With the dumbbells in hand, sit down on a Swiss ball appropriate for your height. From this seated position, gradually walk your feet and lower extremities away from the ball until you reach a supine position with your shoulder girdle and head resting on the Swiss ball and your shinbones perpendicular to the ground. The dumbbells should be positioned straight up from the shoulders, elbows slightly flexed and rotated out. Position the hands with the dumbbells perpendicular to the body.

Movement:

1. Gradually extend the right arm at a 90-degree angle from the body toward the ceiling and slowly rotate your lower right shoulder and shoulder girdle off the ball while maintaining a good structural position.
2. Gradually return the dumbbell to its starting position while simultaneously extending your left hand and dumbbell toward the ceiling in the same manner.

Alternate right and left arms until you have reached the prescribed repetitions.

Lunge—Static and Dynamic



Note: This exercise requires a dowel rod.

Static and Dynamic Lunges are excellent interactive exercises for the core muscles and lower extremities. I chose these exercises because they are neurologically challenging to the entire body.

Static Lunge

Position: Place a dowel rod across your shoulders, gripping it at shoulder width. Keep your elbows under your wrists; this activates the thoracic erectors and helps stabilize the core. Make sure your posture is upright with a neutral spinal curve (no bending, shifting, or leaning).

Movement:

1. Draw your belly button in toward your spine to activate the inner unit.
2. Slowly step forward with either leg until your shinbone is perpendicular to the floor.
3. Once you have reached the lunge position with your upper body erect, let your back leg descend to the floor until your knee gently touches the floor.

Make sure you keep the shinbone on your lead leg perpendicular to the floor.

4. Return slowly to the pre-descend position.
5. Repeat the lunge 8–10 times with the same leg, then repeat for the opposite leg.

Slowly work up to 3 sets per leg.

Dynamic Lunge

The Dynamic Lunge is similar to the Static Lunge, except you return to the standing position after each repetition. Alternate legs until you have built up enough strength and stabilization to perform 8–10 repetitions for each leg.

After you feel comfortable doing the Dynamic Lunge alternating legs, kick it up a notch and do the desired repetitions for one leg at a time.

IMPORTANT! DO NOT SHORT-STEP! Short-stepping the lunge is when the shinbone moves forward and the knee moves past the ankle joint. Short-stepping indicates a quad-dominant neurological system. For women, this can spell disaster! Women have a much higher degree of quad dominance, indicating muscular imbalance in the lower extremities. This imbalance is one reason why some women have more orthopedic knee problems. Keep the shin of your lead leg perpendicular to the floor.

Bent-over Rows



Note: This exercise requires dumbbells.

Bent Rows contribute to good strength and postural stabilization. This exercise also strengthens the shoulder girdle and effectively improves postural muscles such as the hamstrings, glutes, and all deep hip muscles, lower back, latissimus dorsi spinal erectors, and your core. To perform this exercise properly, you must maintain a neutral spinal curve.

Position: Grip the dumbbells with a closed downward grip. Stand with your feet wider than shoulder width and your knees flexed at 30 degrees, which engages the iliotibial band (the tendon on the side of your thighs). Maintain your torso at a 45-degree angle at all times. This starting position resembles a second baseman stance in baseball.

Movement:

1. Take a deep diaphragmatic breath, drawing the belly button in toward the spine.
2. With the dumbbells at knee level, gradually raise the weights to the bottom of your sternum (breastbone). Your forearms should be perpendicular to the ground; do not allow them to travel posteriorly as you raise the weight.
3. Slowly return the weight to the starting position.
4. Repeat for the prescribed number of reps.

Slow tempo aids with overall muscular integration and neurological conditioning. Work up to 3 sets.

Chek Press (Modified Arnold Press)



This exercise is one of my favorite exercises for strengthening and integrating back musculature with the shoulder girdle. To perform the Chek Press, choose dumbbells of a weight that will allow you to do 8–10 repetitions.

Position: With dumbbells in hand, sit on a bench with proper neutral spinal alignment (erect trunk). With the dumbbells shoulder height, palms facing each other and forearms perpendicular to the floor, gradually open your arms as if you were opening a book.

1. Push the dumbbells to an overhead position, bringing the dumbbells together in front of you as if you were closing a book.
2. Lower the dumbbells to the starting position and repeat for the desired number of repetitions.

When the inner and outer units work together, we greatly improve our daily lives by reducing the risk of joint injuries, ligament and muscle strain, and lower back pain.

The next issue we will undertake is posture.

4

Posture

What Is Posture?

POSTURE is the position from which movement begins and ends. Having proper postural alignment enables the body to perform movements quicker with less joint and muscular strain. A qualified physical therapist or a CHEK practitioner in your area should evaluate your posture.

Note: If you're interested in seeing a CHEK practitioner in your area, email me at david@fit-zone.com.

Why Good Posture Is Important

The body is designed to work at the most economical level, thus saving energy for future use. We spend more energy maintaining misaligned posture, which can cause muscle and joint pain. Think of yourself like a skyscraper. If the skyscraper leaned to the left for 10 floors and then a little to the right for 10 floors and so on, you would not enter the building. However, we let ourselves become such a building. We compromise our body's integrity by not maintaining proper posture, resulting in decreased circulation—leading to varicose veins, muscle pain, joint pain, and many other conditions.

Women in general tend to develop poor posture because of many factors. They often have more clerical and computer-oriented jobs that require sitting in a chair, eyeing a computer screen for long periods of time. They also wear high-heeled

shoes, which lead to an alteration and compensation of their posture. (If you want to know more about this, email me.) The development of breast tissue or the augmentation of breasts can lead to many postural changes. Women also have less musculature to maintain proper alignment, leading to rounded shoulders, forward head posture, hyper-extended knees, and increased thoracic and lumbar curves.

Men can also develop all of these postural problems but at a different degree and rate depending on their situation.

To improve your posture and reduce structural damage, you should adhere to a corrective postural exercise program. This simple yet productive program will combat the effects of bad posture and help alleviate joint and muscle pain.

Exercises for correcting posture:

- Prone Cobra
- Axial Extension Trainer
- Wall Leans
- Cervical Extension using a blood pressure cuff

All these exercises can be viewed at www.fit-zone.com/posture.htm.

Prone Cobra



This is a great postural strengthening and endurance exercise.

Position: Lie face down on a comfortable surface.

Movement:

1. Maintaining proper spinal alignment, gradually raise your chest off the ground while simultaneously externally rotating your arms outward, keeping your hands supine. (When you are in the correct position your thumbs are pointing toward the ceiling like a thumbs-up from Fonzie).
2. Gradually draw your shoulderblades together. Keep your head from flexing or extending. Maintain this position for 10 seconds.
3. Return to the starting position and rest for 10 seconds.

Repeat this sequence 10 times, two to three times per day. To assist you in this exercise, use a kitchen timer.

Axial Extension Trainer



This exercise will re-establish what good upright posture feels like. You might want to balance a diver's weight (3–5 pounds) on top of your head so you will understand how upright good posture feels. If you do not assume good upright posture with the diver's weight on, you will feel tension throughout your body and may even drop the weight.

This exercise should be performed for two minutes at a time, six to eight times per day.

Position: Stand up with perfect functional posture.

Movement:

Stand as though you have a balloon tied to the top of your head and it's pulling you toward the sky.

Wall Leans



This is a great exercise for exciting the cervical, thoracic extender musculature and building postural endurance.

Position: Stand with your head, shoulders, buttocks, and heels against a wall. Place a soft towel behind your head for comfort.

Movement:

Walk your feet out one foot from the wall while maintaining a rigid standing posture. Ensure that your hands are at your sides. Maintain this position 30–45 seconds, depending on your current ability.

Repeat this exercise three to four times per day for 30–45 seconds each time. Work up to two minutes in the wall lean position.

Cervical Flexors with a Blood Pressure Cuff



This exercise engages the cervical extension muscles, which tend to get lazy and let the head protrude into forward head posture (which you don't want). This exercise excites the muscle spindles in the cervical extensors. This aids in pulling the head back into proper position.

Position: Lie comfortably on the floor and place the blood pressure cuff under your cervical spine (neck area). Pump the blood pressure cuff up to 40 mm Hg.

Movement:

Tuck your chin to your chest and gently apply pressure to the blood pressure cuff with your neck extender's musculature. The blood pressure cuff should rise up 10 mm Hg to 50 mm Hg. Hold this position for 15 seconds; rest for 10 seconds.

Repeat this cycle for two minutes.

5 Basic Core Conditioning

What Is Posture?

AFTER completing the inner unit exercise program and you have corrected basic postural misalignment, you can move on to basic core training. The *core* is the bridge between the upper and lower body. A strong and stable core will help stabilize large and small joint structures.

Anyone can benefit from a good core conditioning program. Whether you're a mountain climber, housewife doing daily chores, an athlete at any level, or construction worker, everyone needs core conditioning to carry out daily activities and reduce injury.

Women in particular can benefit from inner unit and postural improvement plus the addition of outer unit and core exercises. Because they have a wider pelvis for childbearing. This sometimes leads to a "knock-kneed" lower body posture. This knock-kneed position creates muscle imbalances, sheer force through the pelvis, and compression in the lumbar spine. A simple squat with a belt around your knees can dramatically improve your situation.

Note: If you or someone you know suffers from knock-kneed alignment, email me david@fit-zone.com.

The core exercises should work the outer unit muscles in all three planes of motion:

- Transverse plane (rotation)
- Sagittal plane (backward and forward)
- Frontal plane (left and right)

Knowing the planes of motion is not necessary for improving your core strength and coordination, but will help you understand the theory behind the exercises.

The major muscles of the core consist of the following:

- Internal oblique
- External oblique
- Rectus abdominis
- Transverse abdominis
- Quadratus lumbar
- Spinal erectors

A good core program coordinates all these muscles as one working unit.

The following core exercises contribute to functional integration of the body for both men and women. These exercises will provide maximum benefit.

A core-conditioning program should follow the correct order. Always train your lower abdominals first, followed by your oblique musculature, finishing with the upper abdominals. This exercise order is determined by the neurological demand for each region of your core.

IMPORTANT! MASTERING ALL INNER UNIT EXERCISES IS CRUCIAL BEFORE BEGINNING A CORE CONDITIONING PROGRAM. I CAUTION YOU AGAINST DOING ANY OF THESE EXERCISES WITHOUT A GOOD FUNCTIONING SPINE AND PELVIS. DO NOT PERFORM ANY OF THESE EXERCISES IF YOU HAVE ANY SPINAL ORTHOPEDIC PROBLEMS. YOU MUST HAVE GOOD STABILIZATION AT THE JOINT LEVEL COUPLED WITH PROPER ACTIVATION OF THE TRANSVERSE ABDOMINIS (GIRDLE) TO PREVENT YOUR JOINTS, BIG AND SMALL, FROM DETERIORATION. CONSULT YOUR PHYSICIAN BEFORE STARTING ANY EXERCISE PROGRAM, ESPECIALLY IF YOU HAVE ANY JOINT DETERIORATION.

Reverse Crunch on Floor (Lower Abdominals)



Reverse trunk flexion, commonly known as the Reverse Crunch, is a multi-joint movement designed to target the entire abdominal region. The exercise starts out by contracting the lower abdominals and progressing to the upper rectus abdominis. The oblique musculature assists in stabilizing the pelvis during the movement.

Position: Lie on the floor or exercise mat with your back flat, scapula (shoulder blades) and sacrum (tailbone) pressed firmly against the floor.

Movement:

1. Holding your legs together, flex them to 90 degrees or perpendicular to the floor. Place your arms at your sides.
2. Slowly contract the lower abdominal region by pulling the pelvis up towards the rib cage. Continue to pull the pelvis toward the rib cage until the abdominals are fully contracted and the hips are rolled up slightly off the floor.
3. Slowly lower the trunk and pelvis to the starting position.
4. Repeat for the prescribed number of reps.

Keep your shoulder blades on the floor throughout the exercise. Avoid arching your back at the lumbar region. Keep the tempo or movements slow, and maintain your upper body in proper neutral alignment. Make sure you go down only far enough to touch your sacrum, keeping your thighs perpendicular to the floor.

Horizontal Woodchopper (Internal and External Obliques)



Note: This exercise requires a cable system.

The Horizontal Woodchopper is one of the best exercises for integrating the oblique musculature into functional movement. There are many variations, as you'll see later in this chapter. To begin, start with the standard Horizontal Woodchopper. This exercise will familiarize you with the movement pattern.

Position: Sit on a workout bench perpendicular to the weight stack and cable system. Grasp the cable handle with your right hand and place your left hand over your right. Keep your body in good postural alignment; do not flex forward or sideways. Adjust the weight so that you can accomplish this exercise with proper form.

Movement:

1. Draw your belly button in toward your spine.
2. Pull the cable handle across the front of your chest to the opposite side.
3. Return to the starting position.
4. Repeat for the other side.

You can perform the progression of this exercise while sitting on a Swiss ball, kneeling on the ground, standing, and then to dynamic movement.

Supine Lateral Ball Roll



Note: This exercise requires a Swiss ball and a dowel rod.

The Supine Lateral Ball Roll is an excellent integrative exercise that will challenge anyone.

Position: Sit on the ball and gently roll out so that your trunk is parallel to the floor. The ball should support your head and shoulders. Your feet should be shoulder width apart. Place a dowel rod across your chest and grip it with your palms up.

Movement:

1. Gradually slide your right shoulder blade off the ball, keeping the dowel rod parallel to the floor and your hips in a neutral position (do not let them drop).
2. Slowly return to the middle position.
3. Gently slide your left shoulder blade off the ball and hold for the allotted time.
4. Repeat on each side the desired number of reps.

Floor Crunch



Trunk flexion or the “crunch” sit-up is the most popular exercise for conditioning the abdominal region. When performed correctly, the crunch is a good upper abdominal strengthening exercise. However, if you do not include additional abdominal exercises like the ones described in this program, performing only crunches could have a detrimental effect on your body over time. Overusing the crunch can lead to a more rigid thoracic spine. It also contributes to a shortened rectus abdominis, which in turn pulls the rib cage toward the pelvis, resulting in poor postural alignment. This decreases your ability to extend backward, causing poor posture and leading to potential injury.

Position: If you’re a beginner of trunk flexion or crunch exercises, perform the Floor Crunch lying on the floor. To perform the exercise correctly, maintain proper neutral posture in the cervical spine. Place your tongue on the roof of your mouth to protect your cervical spine. Keep the lower back pressed firmly against the floor throughout the exercise and place your arms across your chest.

Movement:

1. Moving slowly, contract your rectus abdominis, rising up one vertebra at a time. Keep tension in the abdominals at all times. Do not let your chin drop to your chest.

A good way to maintain neutral posture in the cervical spine is to pretend that your chin is traveling toward the ceiling.

2. Once you have reached full contraction, slowly return to the starting position.
3. Repeat for the prescribed number of reps.

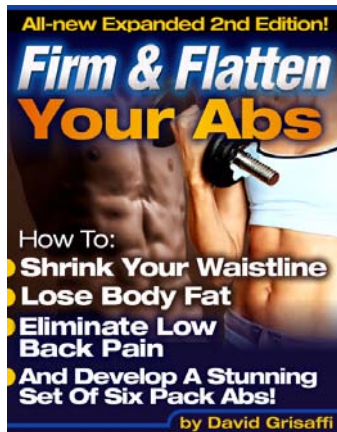
To increase the difficulty of this exercise, place your arms out to the side with your fingertips on your cheekbones.

Note: To find out how to properly perform the Swiss ball trunk flexion, email me at david@fit-zone.com.

Firm and Flatten Your Abs

by David Grisaffi

Ebook Review by Tom Venuto



Abs! Abdominals! Your six-pack! The core muscles! No matter what you call them, everybody wants them. Whether you're training for sports, bodybuilding, or just to look good on the beach; whether you are male or female, young or old, it doesn't matter. There's not a single person who doesn't want a lean, tight, fat free set of abs.

The trouble is, getting great abs is not easy. Most people will waste years of effort and hundreds or even thousands of dollars on all the latest infomercial gadgets and diet gimmicks, trying in vain to obtain that ever elusive lean, muscular six-pack stomach, with nothing to show for their efforts.

If you want to save time and money, separate hype from truth, and bypass years of trial and error, then you must educate yourself in two critical areas: (1) abdominal exercise, and (2) fat burning nutrition. You can't get great abs without both! That's where David Grisaffi's new ebook, *Firm and Flatten Your Abs* (second edition), comes in.

Firm and Flatten Your Abs goes beyond conventional crunch routines, and there's not a single sit-up in the entire book. Much of the program is based on developing a strong, powerful, injury-proof core.

The *core* refers not just to the abdominal muscles, but your entire trunk musculature, including deep muscles you can't see (like the Transversus Abdominis, or TVA).

Why should you care about muscles you can't even see? That's a question I would have asked many years ago in my early competitive bodybuilding days when all I cared about was looking good on stage and having ripped six-pack abs, but now I've learned better. The answer is, among many other reasons, to stabilize the spine and eliminate lower back pain, which 80% of us will suffer from at some time in our lives.

If you're an athlete—recreational or competitive—core strength means better performance on the playing field. If you're not an athlete, greater core strength means

more efficient and safer performance of regular, day to day activities. If you know anyone who blew out their back lifting boxes or simply doing work around the house, you know what I'm talking about.

I've had a copy of the first edition of *Firm and Flatten Your Abs* for a long time and was impressed with the variety and uniqueness of the exercises. However, this second edition really blew me away. The second edition has been completely revised, edited, and tripled in size from 60 to 180 pages. In fact, when I told David how much I enjoyed the new edition of his ebook, he asked me if I would write the foreword and I gladly agreed!

The exercise descriptions and ab workout routines are definitely the strong point of the book, and they have not changed at all from the first edition with the exception of new exercises being added into the mix. (Why change something that already works so well?)

You may be wondering exactly what's in the book, so here's a sneak preview...

The foreword, written by me (Tom Venuto), explains the difference between training for “form” (looks) and training for “function” (strength and performance) and how it's possible to train for both—a revelation of extreme importance for the bodybuilder, the athlete, and weekend warrior alike. This sets the stage nicely for the rest of the book.

The first chapter is a short introduction and welcome message from the author, David Grisaffi.

The second chapter is called “15 Abdominal Myths.” On David's website, www.FlattenYourAbs.net, he says, “This problem (misinformation) is so bad today, that my job of educating people has become like digging a trench in the sand with a sewing needle. Before I can even begin to teach the *truth* about getting muscular abs and losing fat, I have to *un-teach* all the *lies*, *myths*, and *rumors*.” That is exactly what David does in chapter two.

The third chapter is anatomy and physiology of the core. This chapter might seem a little dry to some people, but if you've never heard of the transversus abdominis, multifidus, or psoas muscles, then this is essential reading.

The fourth chapter explains how to set up the perfect abdominal and core conditioning routine. Sets, reps, tempo, rest intervals, and everything else you need to know to put together a workout program that works is all there.

The fifth chapter is the real heart of the program: the seven levels of core and ab workout routines. It's not just the fact that you're given seven routines instead of just one

that makes this chapter so valuable, it's that each routine increases in difficulty step by step to accommodate increasing levels of fitness.

The sixth chapter continues in the heart of the program with descriptions and photographs of more than 50 abdominal and core conditioning exercises. I can guarantee you that, unless you are a veteran exerciser or fitness professional, you have never seen the majority of these exercises before. If you are bored with crunches, sit-ups and leg raises, you are going to *love* this!

The seventh chapter is called, "Top 15 Nutrition Secrets to Flatten Your Abs." People who already have my *Burn the Fat, Feed the Muscle* ebook will no doubt be familiar with most of the principles in chapter 7. However, a brief tutorial on fat burning nutrition is an absolute must in any good book about getting six-pack abs. Because, as the saying goes, "abs are made in the kitchen, not just in the gym."

The eighth chapter, "Ask David: Q & A," is a real gem. This is the part of the book that has been expanded the most since the first edition. David gets thousands of questions by email every month, and he has take the most frequently asked questions and compiled them right here in chapter eight.


The ninth and final chapter is a brief resource directory of recommended products and services. This includes online personal training, ebooks, audio CDs, and equipment.

So now you know what's in the ebook, but you also may be wondering about the exercises and whether you need any special equipment to do them. Good question, since not everyone wants to train in a health club. Many of David's exercises can be done with just your body weight. Others require a stability ball (Swiss ball), and a handful can be done with a cable apparatus you'd find in any gym. This means you can train at home or in a gym, whichever you prefer.

So who will benefit from this ebook? Well, just about anybody. The information applies to you if you are overweight; if you suffer from lower back pain; if you are recovering from C-section, hernia, or abdominal surgery; if you're pregnant or post-pregnancy; if you're an athlete; or even if you're a bodybuilder like me.

The principles in David's ebook are scientifically tested and proven. A graduate of the prestigious Chek Institute with a total of six certifications, David has the credentials and has conducted the research to back up his claims. He spends every day in the trenches, practicing what he preaches as a personal trainer and strength coach for clients as diverse as housewives to professional boxers and golfers.

In summary, *Firm and Flatten Your Abs* is a groundbreaking ebook because it is about form and function, not just form. Stated differently, David's program will help you



develop abs that are every bit as strong and functional as they look. Why settle for a lean, attractive, and sexy waistline when you can have that as well as the strength, stamina, and injury-proof stability of a professional boxer, Greco-Roman wrestler, or a world class gymnast?

That is what separates David's program from the hundreds of other abdominal and core training books, DVDs and classes that clutter the fitness marketplace today.

To order or get more information, click:

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