

For Active Dogs!

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Coaching dog enthusiasts to embrace the unique needs of active dogs through teaching, mentoring and educational media

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Is Your Dog Hardcore?



During the past four years, hundreds of dedicated members of the Fit For Life™ canine health and fitness program have assessed their dogs' front limb, rear limb, and core muscle strength in the process of obtaining an individualized fitness program that targets their dogs' weakest muscles. **Data from almost 400 dogs shows that 62% of the dogs had weak core muscles**, far more than any other part of the body.

Perhaps you are thinking, “But I have an active performance dog! My couldn’t have weak core muscles.” Think again! A couple of years ago, I was asked to **assess the muscular fitness of 20 of Switzerland’s top agility dogs**, many of which were world-class competitors. Any guesses as to **how many of those had strong core muscles**? The answer, stunningly, was exactly **TWO!**

Dogs can appear perfectly healthy and even compete successfully in high level sports with less than adequate core strength. So what’s the big deal?

The answer is, in a word, **injuries**. Let’s see how that can happen.

CORE MUSCLE FUNCTIONS

Core muscles have **two main functions**: to stabilize and mobilize.

1. They **stabilize** the body by helping the dog hold its posture (such as a level topline) and absorb sudden forces that could cause injuries.
2. They **mobilize** by contributing to rapid movement, force and power. They create dorsal, ventral and lateral flexion as well as rotational movements of the body, and they coordinate all movements between the front and rear limbs.

A WEAK CORE INCREASES RISK OF INJURY

A strong core is critical to preventing injuries caused by the long-term effects of repetitive motions that can eventually cause stretching of the ligaments, tendons and fascia that **stabilize** all parts of the dog’s body. Thus, a dog with weak core muscles is at greater risk of:

- **Back problems.** A weak core may cause your dog’s spine to repeatedly hyperextend over jumps or when leaping off a dock or pool edge, eventually resulting in **lumbosacral disease**. This condition often requires expensive surgery and/or rehabilitation to provide relief from chronic neurological pain.
- **Iliopsoas injuries.** With a weak core, your dog has less control over its rear legs, increasing the likelihood of chronic, recurrent **iliopsoas strain**, a painful and difficult-to-resolve injury.
- **Cranial cruciate ligament (CCL) injuries.** A weak core can prevent your dog from stabilizing its rear legs sufficiently, eventually resulting in a tear or complete rupture of the cranial cruciate ligament. This requires expensive surgery and rehabilitation.
- **Shoulder injuries.** If your dog’s core is weak, its ability to coordinate and stabilize the front limbs might be impaired sufficiently that over time the soft tissues that support the shoulder joint can stretch and tear. Damage to these structures results in **supraspinatus tendinopathy, biceps tendinopathy, and/or medial shoulder syndrome**, requiring expensive corrective surgery followed by months of rehabilitation therapy.

Perhaps you or a friend have experienced the **heartache** and hassles that comes with these injuries. Might they have been the result of a weak core? None of us want our dogs to experience these injuries. Nor do we want the **expense** and **lost time** of treating them. Luckily, there are actions you can take now to build your dog’s core to help prevent these injuries. But first, let’s take a quick look at the exact muscles we are talking about, so you can have a better idea of how to improve their function.

THE CORE MUSCLES – A BOX AROUND THE BODY

If we look at a cross section of the dog’s body (**Figure 1**), it looks like a box. At the top of the box are the paraspinals, the large muscles that surround the spine. The epaxial muscles (dark blue) lie above the spinal cord while the hypaxial muscles (lime green) lie below the spinal cord. Together they stabilize

the spinal column and its associated neurological structures, as well flex and extend the spine during movement. There are those important stabilization and mobilization functions again!

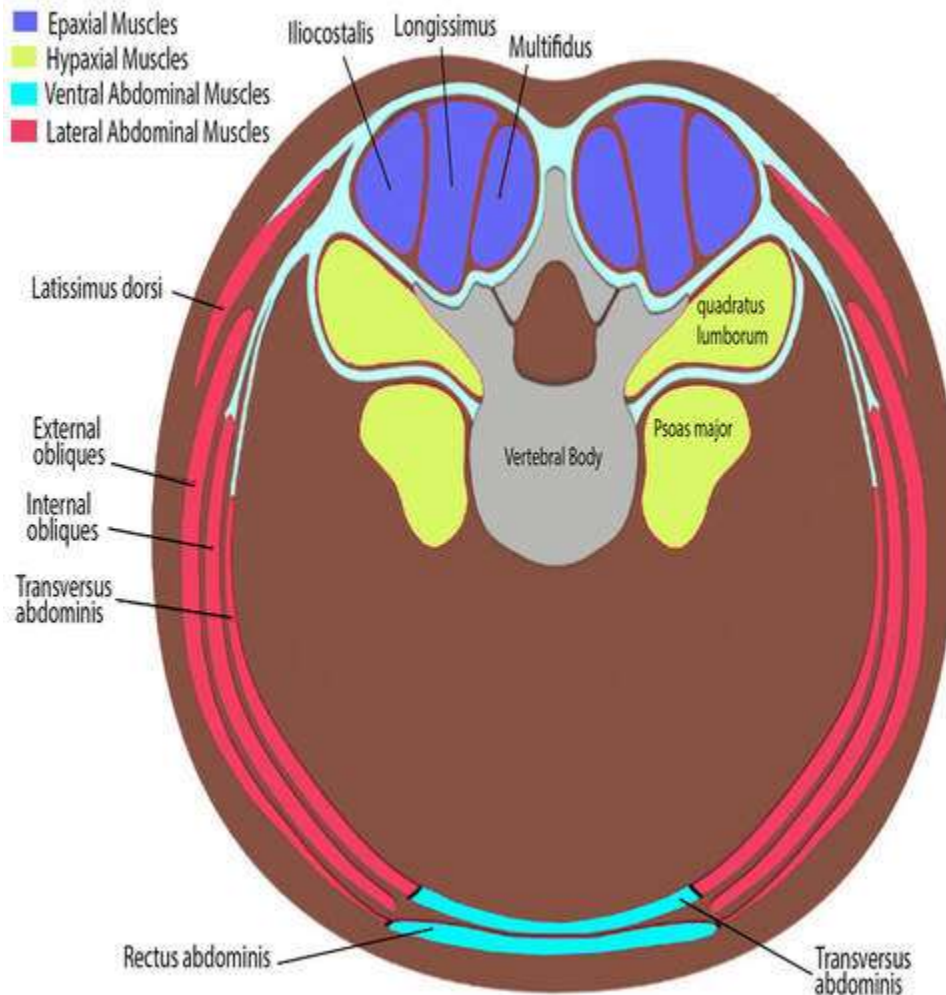


Figure 1

The sides of the core box consist of layers of lateral abdominal muscles (red). They support the abdominal organs, stabilize the abdomen against abnormal forces, and help with sideways motions, such as when your dog quickly spins to chase that squirrel that had the audacity to enter your yard.

Finally, the bottom of the box has just two muscles (dark green), the strongest of which is the *rectus abdominis* – the same one that is responsible for “six-pack abs” in humans.

HOW TO STRENGTHEN CORE MUSCLES

Since we know that the core muscles form a box around the body, it makes sense that movements that flex and extend any of the four sides of the box will strengthen those muscles, right? That’s generally true, but there’s more to it than that.

As strong proponents and designers of individualized fitness programs for dogs, we always start creating an exercise program by asking some questions about the dog.

1. What is the dog’s age?

a. Puppy under 6 months of age. In young puppies, we don’t recommend exercises to strengthen the core

muscles because puppy bodies aren't mature enough to deal with those forces yet.

b. Senior or geriatric dog. Most older dogs have weak core muscles. Signs include a dipped topline, slow or uncoordinated transitions between sitting, standing, and lying down, and scuffing the rear feet. If your dog shows any of these signs, be very careful with core exercises so as not to cause an injury.

c. 7 months to adult to senior dog. Dogs in their most active years need BOTH core stability exercises AND core mobility exercises.

2. What is your dog's current level of core strength?

Where you begin in strengthening your dog's core should be based on its current core strength. You can easily test this by have your dog sit up and beg on its haunches. Don't worry, scientific studies have proven that this is NOT injurious to dogs. In fact, baby puppies sit up this way to nurse!

If your dog can sit up on its haunches for 15 seconds, you can start with the intermediate core strength exercises described below. If not, start with the basic level, just to be safe.

Figure 2 summarizes the functions of the core muscles, types of training to strengthen these muscles, and the results of such training. Except for flexibility, be sure to have a plan to keep your dog progressing, constantly improving its balance and proprioception, as well as strength.

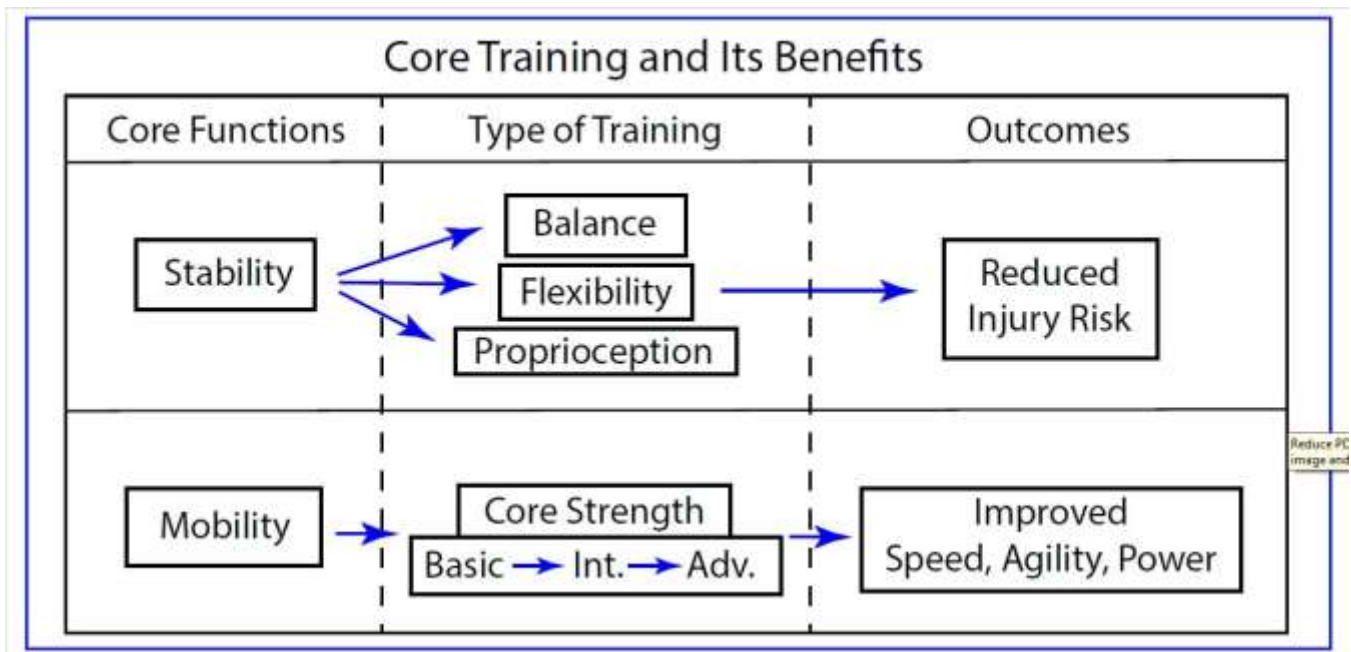


Figure 2

CORE STABILITY EXERCISES

All dogs need core stability exercises but young puppies under 6 months of age and weak senior dogs must first pursue these exercises before moving to core mobility exercises. Examples include:

- **Proprioceptive** (body awareness) exercises such as walking SLOWLY forward and backward over a ladder placed on the ground*
- **Balance** exercises such as walking and turning along a slightly elevated plank*
- **Flexibility** exercises such as play bows and side bending by nibbling on a cookie placed next to the hip or a rear foot*

CORE MOBILITY EXERCISES

Core mobility or strength exercises build the dog's paraspinal, lateral abdominal, and ventral abdominal muscles, either individually or together. Ensure that your dog's regular fitness routine focuses on these exercises.

Examples of Basic Core Strength Exercises*

- *Rear Leg Lifts.* Lift and hold one rear leg for an extended period while your dog stands with its front slightly elevated. Do each rear leg separately.
- *Front Leg Lifts.* Lift and hold one front leg for an extended period while your dog stands with its rear slightly elevated. Do each front leg separately.
- *Sit-Stand-Sit.* Teach your dog to move between the sit and stand positions with the front feet slightly elevated and remaining stationary.

Examples of Intermediate Core Strength Exercises*

- *Rocket Dog.* Have your dog sit up and remained balanced on its haunches while nibbling on food. Move the food in different directions to increase the difficulty.
- *Roll Over.* Have your dog lie down, roll onto its back and return to front all in one continuous motion three times in a row. Go both ways.
- *Sit-Down-Sit.* Have your dog move from a stand to a down and back without moving its feet.

Examples of Advanced Core Strength Exercises*

- *Crawling.* Have your dog belly crawl, lifting its belly just a few inches above the ground.
- *Diagonal Leg Lifts.* Lift and hold diagonal front and rear legs so your dog uses its core to support its weight. Be sure to do this on both sides.
- *Walking a Peanut Ball.* Have your dog roll a peanut-shaped ball with its front feet on the ball and its rear feet on the ground.

THE BOTTOM LINE

Just 10 minutes of core exercises, three times a week, could not only save you \$5,000 or more in veterinary bills, they could also save you the heartache of seeing your dog in pain and perhaps having to experience surgery, long-term rehabilitation, and potentially continuing reduced function. For agility and other performance competitors, two studies involving thousands of agility dogs showed that fully one-third would experience an injury severe enough to stop training and competing for some period of time (2, 3). With those stats in mind, core strength training seems like a pretty solid alternative!

*Want help with your dog's individual core fitness plan? All of the above exercises plus many more, along with individual coaching can be had in Fit For Life™ <https://www.avidogzink.com/canine-fitness-memberships/>

*Videos of these exercises and more can be purchased online at: <https://www.avidogzink.com/shop/ffl-flash-2/>

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