

Don't Get Caught in the Crunch: The Shift to Functional Training

Functional training involves incorporating strength and agility moves that will make daily activities easier to perform. Training the muscles according to the patterns in which they are used to climb stairs, bend, lift, push, pull, walk or run makes sense from a neuromuscular standpoint, and allows many muscle systems to be strengthened synergistically.

Isolation exercises are slowly becoming passé in many conditioning programs. For specific rehabilitative purposes, isolation exercises absolutely have merit, but functionally they are just not making the grade. For example, developing a six-pack through isolating the rectus abdominis may give you the look but is very unlikely to improve your game.

Current sport-specific training techniques lend themselves to functional training in which the focus is placed on movement patterns not muscles. Though abdominal crunches have been a staple in gyms for years, they have little functional merit. The new trend for developing a strong core is to train in functional movement patterns. Of course, actual kayaking, canoeing or hiking in a true functional setting represents real abdominal training while, at the same time, challenging many other muscle systems.

“According to the Specificity Principle of Training,” says physiotherapist Rick Jemmett, author of *The Athlete's Ball*, and *Spinal Stabilization: The New Science of Back Pain*, “an athlete should always train using exercises which mimic – as closely as possible – the exact demands of their sport.”(1)

Sport-specific training takes it a step further by adding resistance or unstable surfaces to improve performance. Athletes wanting to improve their sports performance can get creative with training techniques. “The idea is to take a sport-specific posture or movement,” Jemmett tells us, “and learn to perform it well while in a balance-challenged situation.”(2) Exercises can be used that involve pushing, pulling, squats, lunges or rotational strengthening. A walking lunge with an oblique twist (Figure 1) would be an excellent start! Wall push-ups (Figure 2) strengthen the pectoral



Figure 1



Figure 2



Figure 3

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muscles as well as the triceps while synergistically engaging the stabilizing muscles of the rest of the body. In both these exercises, the core muscles (transverse abdominis, multifidus, pelvic floor, rectus abdominis, internal/external obliques, erector spinae) must be contracted to maintain the spine in a neutral position throughout the exercise.

Keep in mind that since repetitive sport movement will create asymmetry at specific joints, care must be taken to also include exercises that provide balance. In kayaking, for instance, the repetitive pulling will result in asymmetry between the external and internal rotators. To ensure shoulder joint stability, it is crucial to include pushing exercises as well. (Figure 2)

The average exerciser should be aware of his or her physiological capabilities before embarking on this type of program. As with any training program, appropriate protocols should be considered. All of these movements should be performed in a slow and controlled manner and in full range of motion.

DRY LAND ROWING (Figure 3)

In this very advanced dry land paddling exercise, the balance dome or half-ball provides a balance challenge for the core muscles. Note that there are two unstable points of contact. Add a weighted bar as a paddle to challenge the shoulders, and rotational movements to challenge the torso, and you have a kayak- or canoe-specific training move that is extremely effective but tough.

WALL PUSH-UPS (Figure 2)

A wall push-up is an excellent exercise for the pectorals and triceps, but requires a strong core to maintain a neutral spine. Hold the body in a "plank" position from heels to shoulders while lowering yourself toward the wall. The further away you are from the wall, the more difficult it will be to maintain position. Do not let your hips sag or your back extend. If you have a strong core and find this too easy, try using an unstable base such as an air-filled cushion or perform the move by wearing low-impact athletic shoes to increase the challenge. If that

is not challenging enough, it's time to hit the floor and advance to the military-style, plank push-up.

WALKING LUNGE WITH OBLIQUE TWIST (Figure 1)

The walking lunge with oblique twist movement will emphasize strengthening of the quadriceps and gluteals of the leg in front while providing dynamic flexibility to the back leg. The back extensors and abdominals work to stabilize the trunk with each step.

Adding an oblique twist while holding a medicine ball will make the exercise more challenging as well as help develop strong stabilizers in a rotational movement pattern. Ensure that you maintain proper alignment of the front leg (knee directly over ankle) with each step. •

References:

Jemmett R. *The Athlete's Ball*. Novont Health Publishing Limited, 2004: 4.

Ibid: 25.



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