



HUMAN PERFORMANCE RESOURCE CENTER
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PHYSICAL
FITNESS

PERFORMANCE STRATEGIES:
CORE STRENGTH: IT'S NOT ALL ABOUT SIT-UPS

Strengthening the core—which includes not only abdominal muscles, but also back, hip, quad, and glute muscles—has numerous benefits. You can improve your balance, performance (running, jumping), posture, and back support—all by increasing your core strength. These benefits are especially important as you age and lose bone mass—especially in the lower spine—leaving you vulnerable to injury even while doing everyday tasks. Increased balance and posture can also help to prevent injuries in aging adults or those with previous injuries. If the benefits aren't enough to convince you of the importance of core strength, consider that injuries of the back and lower extremities account for 40% of all musculoskeletal injuries in the military. Also, spinal injuries are the number one reason for soldiers to remain non-deployable because of the resistance to therapy and ultimately re-injury. Back pain is often caused by weak muscles, which can be relieved by strengthening the muscles of the core. Limiting your routine to the same exercises—sit ups, for example—only targets those specific muscles, not the other muscles that also make up your the core, so you can help prevent injuries by alternating exercises that strengthen your core. The Navy and HPRC highlight various exercises to improve your core strength. Many health centers at military installations provide free group exercise classes that highlight different exercises. Here are some strategies for core strength:

- **Strategy #1:** Mind/body classes such as yoga and Pilates focus on core strengthening along with balance and stretching. These classes are low-impact and promote relaxation, which everyone can benefit from, while also strengthening postural muscles—the back and abdomen.
- **Strategy #2:** Dance classes such as Zumba provide a total body workout that especially benefits the muscles of the core. These classes are fun and can be appropriate for all age groups because you can do as little or as much as you want during the class.
- **Strategy #3:** Vertical core exercises versus ones done on the floor are more practical because they strengthen the core through movements you do on an everyday basis. These exercises often use a medicine ball or a wall. It's helpful to watch videos of vertical core exercises being done in order to perform them correctly.
- **Strategy #4:** The use of stability balls, BOSU (blue half-ball with flat platform), balance disks, foam rollers, and vibration machines can make an exercise routine more interesting and provide a workout to various muscles of the core. These items are commonly found at fitness centers and focus on balance, which indirectly strengthens the core and reduces your chances of back pain.
- **Strategy #5:** Functional fitness—using strength training to improve balance and ease of daily living—is growing in popularity because of the baby boom generation reaching retirement age. Many facilities offer special programs for aging adults that focus on functional fitness.
- **Strategy #6:** There are specific core exercises for those with back pain, but you should discuss these with your healthcare provider before giving them a try.