

Equal but not the Same

By Paul Chek

God may have created man and woman equal, but they were not created the same. And yet women often follow the same training patterns and formulas as their male counterparts. Drawing upon a growing body of research and years of working with clients, Paul Chek has developed a training formula that increases strength and reduces the risk for injury by acknowledging the unique characteristics and specific needs of a woman's body.

The female body—particularly at joint structures such as the wrist, shoulder, knee and ankle—is smaller. And women are typically more energy efficient than men are, with men being stronger when calculated by absolute strength. A woman's energy efficiency is likely to be a physiological necessity when you consider the female body is designed to carry a developing fetus for nine months in what would have been unpredictable times over the span of human development. In fact, Australian researcher Robbie Parker reported that females use approximately 40% less energy than men when walking the same distance. The females' greater "Q" angle has been associated with their increased prevalence of non-contact ACL injuries. Because of an increased "Q" angle and wider pelvis, the female exerciser or athlete suffers medial rotational instability of the lower extremity more frequently than males. The best cure is functional exercise with specific attention being given to core and hip stabilizers. Exercises recruiting the hip extensor mechanism in concert with good core stabilization aid females both aesthetically and functionally.

Surgeons also note that in females there is less space in the condylar notch through which the ACL passes. When the condylar notch is small, the ACL is predisposed to unwanted friction, particularly if the legs are not functionally stable.

Osteoporosis and Dowager's humps

Osteoporosis (which is the reduction of bone or atrophy of skeletal tissue) and dowager's humps (the rounded area on the back at the base of the neck) are conditions women in earlier years didn't begin thinking about until they hit the postmenopausal years. Not anymore! Research has found some women in their early 30's are showing significant bone loss and early onset dowager's humps (Fenton, A.). Poor nutritional habits and overexposure to aerobic exercise were cited as major contributors to the problem. Clinically, I have treated many aerobicizers and distance-running women for stress fractures secondary to the very same things. And studies on soldiers indicate that women are five to 10 times more likely to develop a stress fracture than men and often develop them earlier under the same conditions (Burr, D.B.).

The Keys to a Stronger Body

These differences should not be viewed as risk of injury. Keep in mind, however, that just as women are anatomically or physiologically different from men, there is a large degree of variation among women as well.

A successful exercise program must include the following elements, each of which builds upon the other:

- **Flexibility**
- **Stability**
- **Strength**
- **Power**

Flexibility First

The first step in any exercise program is to restore flexibility to muscles that are restricting or altering joint motion. As a woman's flexibility improves, she should choose exercises that improve functional stability, particularly in the core/pelvis region, which is imperative to injury prevention in all sports. The most important muscle for a woman to restore and maintain optimal levels of function is the transversus abdominis (TVA). The TVA, through its relationship with the thoraciclumbar fascia, is intimate with the breathing apparatus, the paraspinal and deep stabilizer muscles of the spine, the pelvic floor, the hamstrings, and the peroneal muscles of the lower leg and foot.

Commonly associated with older, sedentary women, incontinence is actually a common complaint among exercising women. Nygaard et al. Found that 47% of exercising females at an average age of 38.5 years suffered from incontinence. By exercising the TVA, the exerciser often improves both incontinence and stability of the spine, pelvis and legs - a double benefit! This is because the TVA is neurologically linked to the muscles of the pelvic floor and the deep stabilizer muscles of the back. This simple procedure is described in *Paul Chek's Equal, but not the Same correspondence course*.

Free-weights for a Strong, Functional Body

Another important step toward improving function in the female body is to minimize the use of machines. Machines are bolted to the floor, have a guided resistance and most often require exercises be performed from a seated position. Such a training environment does not develop the stabilizer or postural mechanisms of the body, leaving the door wide open for injury. This is a frequent occurrence even after achieving what would appear to be high levels of fitness using a machine based program.

To develop functional stability and strength, begin all workouts with the free weight or free-body exercise that requires the use of the greatest number of muscles and joints, such as lunges or standing dumbbell presses. Then, if your conditioning level is high, choose another similar, but slightly less challenging

free-weight exercise. Finally, progress to machine training for an additional two to four exercises.

Women need not be concerned that adding free weight exercises to their program will result in large muscles. Females naturally have higher levels of estrogen and much lower levels of the muscle-building hormone, testosterone than males. Female body builders spend between three and five hours a day in gym trying to achieve the muscle development other women fear. In fact, putting muscle mass on a female is so challenging that many female body builders turn to anabolic steroids for assistance.

Powering Up

Power or high-speed exercises should only be performed after optimal flexibility to all major working joints has been restored, and adequate levels of functional stability and strength have been achieved. Whenever the amplitude or velocity of an exercise is increased, the forces through the joints, muscles and connective tissues significantly increase. Athletic trainers should also be aware that females are significantly weaker than males and are prone to injury when exposed to plyometric exercises used for male athletes of the same training age (Scientific Physical Therapy). In fact, most sports are won and lost through the performance of “power movements”. Inadequate stability or strength results in an increased risk for injury.

Step by Step

The female athlete wanting the most from her body, both functionally and aesthetically will reap significant benefits from restoring function to the TVA, which is frequently dysfunctional after childbearing, cesarean section or hysterectomy.

1. Increase flexibility by setting aside time each day to stretch.
2. Exercises done with a stability ball are ideal for increasing core stability and strength. Perform these and free-weight exercises at the beginning of an exercise program and move on to machine exercises only when the nervous system is fatigued from the more complex exercises.
3. After a course of eight to 16 weeks of progressive stability and strength-training exercises, power-training exercises such as plyometrics should be added. Always remembering that females need gender specific doses of eccentric exercises.

When beginning an exercise program, it is important to step back and assess your needs from the beginning. Every woman has different training needs and should never be put on a “canned” training program. Detailed assessment tools and programming information for the female athlete can be found in *Paul Chek's Equal, but not the Same correspondence course*.

References:

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