

Paul Chek's Points for More Effective Training

By Paul Chek

I know you've all sifted through the fluff, filler, and down right dead space in articles in hopes of finding some news you can use. In today's hustle and bustle world, we all just want to get to the point, right to the point! So here it is, no fluff, no filler, no dead space - just pearls:

Women and Exercise

Women must be careful not to over indulge in training on weight machines, for two main reasons: **to prevent joint injury** and **to maximize exercise efficiency**. Females are generally much more flexible but not as strong as their male counterpart. Plus women experience increased joint laxity when premenstrual, which added together leads to a high susceptibility to joint injury. It is well documented that females have higher incidence of injury than men in almost every sport in which both sexes participate. It is important to consider this when choosing resistance exercises. Machine exercises require almost no activation of stabilizer muscles, compared to free weight exercises, which require maximal activation of stabilizers. To strengthen stabilizers and help prevent joint injury, females should primarily perform multi-joint free weight exercises e.g. lunges, squats, dead lifts, bent over rows, lat pull downs, squat push presses, upright rows, bent over dumbbell fly's, dumbbell bench press and dumbbell military press. Exercises using body weight resistance will also prove to be excellent, e.g. push-ups, chin-ups, and dips, jumping and hopping drills and a variety of abdominal exercises.

The vast majority of female exercisers want to lose weight. Women have been quick to migrate to machines, often hoping to see the aesthetic benefits. Bodybuilding, machine manufacturers, and lack of education in the exercise profession have fueled this machine craving. However machines frequently focus on isolated joint movements and activate only select muscles. This results in minimal caloric expenditure and perpetuates imbalance between prime mover and stabilizer muscles. Multi-joint free weight exercises will maintain balance in the working musculature and burn far more calories, helping women stay lean and injury free!

Train Slow – Be Slow!

There is no doubt that high resistance training can improve performance in most any sport. Unfortunately, few publications readily explain how to use weight training to enhance sports performance. Instead, athletes read bodybuilding magazines for the latest weight training programs. The problem with this lies in the fact that body builders' goals are mass-driven and so they most commonly train with very a slow tempo; a biceps curl for example may be performed over the span of six seconds. Slow tempo training is very good for developing muscle mass, but not for enhancing one's quickness.

To achieve higher levels of carryover to sport, athletic participants should cycle their tempo in three-week blocks. For example, the chin-up can be performed for three weeks at a three up-three down tempo. The following three weeks at two up-two down, and finally three weeks of pulling up explosively, lowering at a moderate pace to protect the joints. The slow training should be performed as far away from the start of the season as possible, cycling such that you perform fast movements as the season begins.

During the season, athletes may maintain strength by performing combination training techniques. This technique requires that you perform an exercise such as the squat for strength, followed immediately by explosive box jumps, or heavy bench press followed immediately by medicine ball chest passes or explosive push-ups. This allows for high loads through the muscles and joints to maintain strength, yet capitalizes on the excitement in the nervous system for high-speed movements. This is also referred to as contrast training. So remember, if you always train slow, you will always be slow!!

Flat Surface Training is Dead!

For years and years and years, we have been performing crunches and sit-ups as a primary source of abdominal conditioning. This has led to increased spinal curvature in the middle back. Because you start these exercises lying flat on your back and then flex forward, the abdominal muscles are continually trained in a shortened range of motion. In fact, the crunch motion is completed by 30 degrees of trunk flexion, leaving the hip flexors to do the rest of the work. Is this where you really want your abdominal muscles to be strong?

Most sports require some use of the arms to throw or swing implements or the arms themselves, such as in boxing and martial arts. Remember, the trunk muscles drive the arms and legs. With this in mind, you must ask yourself, where would I benefit most from abdominal strength? Quite simply, it is behind the range of a standard crunch or sit-up. To better explain, think of a tennis player serving the ball. He can't even begin to use the strength developed from crunches until well into the serve, when his trunk begins to flex forward. Or, think of a golf swing. You could not benefit from your abdominal crunch exercise until the club was in the same plane as the body, just before it contacts the ball.

To develop abdominals that are truly functional, train from a position of trunk extension, and start behind where the typical crunch even begins. This can easily be done by performing the crunch on a Swiss Ball, which allows you to begin from as much as 70 degrees of spinal extension, or practice standing overhead medicine ball tosses, once again activating the abdominals from an extended trunk position. It is exercises like these that will give you explosive serving power, right from the wind up. They'll also give you an awesome drive as you will increase power being generated by the abdominals at first initiation of the swing!

Overexposure to flat surface training leads to a spine that will not straighten properly. This is a problem for all racquet sport and throwing athletes because the spine and shoulder work together. As an athlete's arm reaches the overhead position, the middle spine must begin to extend or excessive strain is placed on the shoulder joint. When this happens repetitively over time, the shoulder will become injured, and never fully recover until correct spinal motion is regained. With this in mind, realize that a large amount of crunches and sit-ups are highly correlated with loss of extension in the middle back and subsequent shoulder injury in racquet sport and throwing athletes. So get on the ball!

Lose Your Curve and Lose Your Life!

The spine has a natural S-curve: the lower back has a forward curvature (towards the belly button), while the middle back has a slight hump or posterior curvature. The forward curvature of the low back is essential to maintain proper weight bearing relationships in the disks and spinal joints. If this curvature is not maintained during lifting activities, both disk and ligament run the risk of injury. There is however a tradeoff of risks; when the low back curvature is held throughout a lift, there is an elevated risk of muscle injury, since ligament support is greatly reduced in this position.

Although the thought of a muscle injury from heavy lifting may be alarming, an injury to the ligaments or disks can be devastating. Muscles heal very fast, usually in less than two weeks. Ligaments often take six times longer than muscles to heal, while a disk injury will take between 300-500 days to heal! With this clinical information in mind, it becomes evident that maintaining your natural spinal curvature throughout a lift is essential. I call this the \$63,000 question because that is the average cost of back surgery today!

In my seminars I teach trainers to how test a client's ability to maintain an optimal lifting posture. To perform the test, simply have a friend run one ten inch strip of athletic tape up each side of your spine. The tape should run upward from the base of the spine and should be applied in your natural standing posture (providing that you have good posture!). Once the tape is applied you can then attempt lifts such as squats and dead lifts. If your form is good, you will not feel the tape pulling. If your form is poor, let's hope you have no hair on your back! Good lifting.