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Tennis Play in Special Situations

by
Graham Hatcher

Tennis players train with expectations that are, often times, vastly different from the realities they are presented with during matches. Ideal conditions for a match do not always exist and coaches need to help their players recognize how to function effectively regardless of the situation.

Advanced and highly-skilled tennis players have encountered various situations based on their experiences but, nevertheless, all players have to compensate when special situations occur.

It is believed that the coach should include discussions

about playing in special situations in order to prepare fully his players for competition. The following three situations should be stressed by coaches during practice sessions.

Environmental conditions. Conditions of extreme cold and heat and humidity necessitate some common sense adjustments for players. An early season source of injury is pulled muscles during those first few outdoor matches. Proper warm-up, including appropriate stretches for flexibility, is vital to minimizing the risks in acquiring this type of injury.

When it is hot and humid players should begin consuming fluids regularly during the first changeover. When they have waited until they are really thirsty, their performance may have already been affected.

The wind can serve as a great equalizer in that matches that normally should not be close may turn out to be that way due to one player's inability to adjust to windy conditions. Players need to recognize two basic concepts about playing in the wind.

These are the need to move one's feet and also to control the racket head in prepara-

Strength Training Q&A

#8

by
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What's the correct way to breathe when I'm lifting weights?

It's important to breath properly during strenuous activities like weight training -- especially during maximal efforts. Holding your breath during exertion creates an elevated pressure in your abdominal and thoracic cavities. This is called the Valsalva maneuver or phenomenon and may cause you to lose conscious or blackout. In addition, the blood pressure response tends to be exaggerated as well.

As it turns out, if you just breath naturally you'll be fine. However, if you want to emphasize correct breathing, exhale when you raise the resistance and inhale when you lower the resistance. Or, simply remember EOE - Exhale on Effort.

I noticed that I'm starting to get a little "spare tire" around my midsection. Should I do lots of situps to get rid of the fat?

No! That's a common misconception that pertains to the localized loss of body fat or, in exercise physiology parlance, the myth of "spot reducing." It isn't necessary to perform thousands -- or even hundreds -- of repetitions in order to exercise your abdominals. Yet, many people perform countless repetitions of situps, knee-ups and other abdominal exercises every day with the belief that this will give them a highly prized set of "washboard abs." Although such Olympian efforts will certainly work your underlying abdominal muscles, it has little effect on your overlying fatty tissue. The reason you can't lose fat in one area alone is that when you exercise, you are drawing upon energy stores from all over your body as a source of fuel -- not just from one specific area. So, you can do situps until you pass out, but that won't automatically trim your midsection! Quite simply, spot reduction is impossible.

Your abs should be treated like any other muscle group.

Once an activity for the abs exceeds about 70 seconds in duration, it becomes a test of endurance rather than strength. You can work your abdominals effectively in a time efficient manner by exercising them to the point of concentric muscular failure between 8 - 12 reps (or about 40 - 70 seconds).

I read somewhere that athletes should do power cleans because it's specific to sports movements and increases explosive power. What's a power clean?

A power clean is basically the initial phase of a competitive, Olympic-style lift know as the "clean and jerk." Power cleans have long been touted as being specific to an incredibly wide range of skills from the breast stroke to the golf swing to the shot put. It's absolutely impossible for one movement to be identical to such a broad group of differing skills. Indeed, how can something be specific to everything?

Using weighted implements to simulate or mimic sports skills has been thought to contribute to the learning of specific motor patterns. Individuals often practice with weighted objects -- such as barbells, dumbbells and medicine balls- during this "overload training" with the expectation of improving performance. However, studies indicate that overload training is not accompanied by a measurable improvement in performance in the skills that have been practiced with weighted objects. The support for overload training is purely anecdotal.

If there were a correlation between weightlifting skills and other sports skills then highly successful weightlifters would excel at literally every sports-related movement that they attempted. So, if five members of the Bulgarian National Weightlifting Team were placed on a basketball court they should easily win every game! Naturally, this wouldn't happen. That's because there is absolutely no "carryover" between weightlifting skills and other athletic skills.

The Principle of Specificity is well-documented in the motor learning literature. Briefly, it states that your activities must be *specific* to the intended skill in order for maximal improvement to occur. Specific means *exact* or *identical* . . . not *similar* or *just like*. So, power cleans may be *similar* to jumping for a rebound and an exercise like lunges may be *just like* driving toward the hoop but power

cleans will only help you get better at doing power cleans and lunges will only help you get better at doing lunges. Likewise, tossing medicine balls around is great for improving your skill at tossing medicine balls around and nothing else. Furthermore, there is no exercise done in the weight room -- with barbells or machines -- that will expedite the learning of sports skills. One motor learning researcher has concluded that "any attempt to improve performance by utilizing objects that are slightly heavier than normal while practicing gross motor skills that will be later used in sports competition seems to be hardly worth the time spent and the money paid for the weighted objects."

In addition, a movement like a power clean is an extremely complex motor skill. Like any other motor skill, it takes a lot of time and patience to master its specific neuromuscular pattern. This valuable time and energy could be used more effectively elsewhere -- such as perfecting your dribbling or shooting skills. More importantly, a power clean is inherently dangerous because it is performed explosively. Recall that ballistic movements are also inefficient due to the involvement of momentum. Finally, "explosive" lifting does not translate into "explosive" athletic skills. For these reasons, power cleans should only be done by competitive Olympic-style weightlifters -- and only because it's part of their sport.

About the Author

Matt Brzycki has been the Strength Coach and Health Fitness Coordinator at Princeton University since August 1990. Coach Brzycki has authored more than 90 articles on strength and fitness and a book, A Practical Approach to Strength Training, which is in its second edition. He has also coauthored the book Conditioning for Basketball with Shaun Brown, Strength Coach for the University of Kentucky basketball team.