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AF Q & A

BY MATT BRZYCKI

HOW DOES RUNNING ON SAND DIFFER FROM RUNNING ON A SOLID SURFACE?

With warm weather beginning to stretch across most of the country, fitness enthusiasts are taking to the outdoors. Many of those who live near a beach have the opportunity of exercising on sand.

Researchers in Italy assigned 29 male professional soccer players (average age 19) to perform two different activities: an all-out sprint of 12 meters and an all-out shuttle sprint of 24 meters (12 meters out, a 180° change of direction and 12 meters back). Each sprint was done on natural grass, artificial turf and sand. Both sprints were done on the same day and repeated twice with the best performance used.

In comparison with sprinting on a solid surface, sprinting on sand resulted in worse performance in most measures, including slower speed and acceleration and decreased stride length. However, despite the slower speed, the energy cost of sprinting on sand was greater than sprinting on grass and turf. Surprisingly, stride frequency remained the same. There were no significant differences in any measure between grass and turf.

DOES PERFORMING MULTIPLE SETS OF AN EXERCISE PRODUCE BETTER RESULTS THAN ONE SET OF AN EXERCISE?

The debate over multiple sets versus single sets has been raging for decades. This, despite an extensive review of the literature published in 1998 in which researchers at Adelphi University found no significant differences between doing one set of an exercise and doing multiple sets.

In a recent study, researchers in the United Kingdom randomly assigned 16 men (average age 19.8) to two groups: One group did three sets of each exercise and the other did one set of each. Prior to the study the subjects had at least one year of experience doing the exercises that were tested. Both groups trained three times per week for eight weeks and did nine exercises with free weights for their upper bodies. The groups did six repetitions of each exercise to the point of muscular fatigue.

Both groups significantly increased their strength with no major difference between them. Also, both groups significantly reduced the sum of their skinfolds, but the group that did one set had a notably greater decrease than the other group that did three.

Add another study to the list of those that showed doing a single set of an exercise can be at least as effective as multiple sets.

Bottom line: More isn't necessarily better when it comes to strength training.

DO DIETS BASED ON BLOOD TYPE HAVE ANY MERIT?

Mosey into any bookstore and you'll see that there's a seemingly endless inventory of diet books on the shelves. One diet that has received considerable attention for nearly 20 years suggests that people should eat according to their blood type. Claims for its effectiveness are based on the unproven assumption that each blood type processes food differently.

Researchers in Belgium conducted a literature review of published studies in which subjects were grouped by blood type and followed a particular diet designed to improve some measure of health. Surprisingly, they found only one published study that met these criteria.

In that study, 315 subjects were randomly assigned to three experimental groups that consumed a low-fat diet or three control groups that consumed a standard diet. All groups were based on blood types. It was discovered that blood groups responded differently to the low-fat diet. However, of the 315 subjects, only 254 were analyzed. So, the responses of 61 subjects were unaccounted, which means that the results must be interpreted with caution.

MATT BRZYCKI *is the Assistant Director of Campus Recreation, Fitness at Princeton University. He has more than 30 years of experience at the collegiate level and has authored, co-authored and edited 17 books.*

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