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Q&A

[BY MATT BRZYCKI]

What is Volumetrics?

Though it has been linked with weight management, Volumetrics is an approach that can actually be used by anyone to select nutritious and satisfying foods. It's based on the research of Barbara Rolls, Ph.D., the Guthrie chair of nutritional sciences and director of the Laboratory for the Study of Human Ingestive Behavior at Penn State University, State College, Pa.

One of the key aspects of Volumetrics is that it emphasizes the number of calories in a given weight of food. This is referred to as "energy density" or "caloric density." Studies have shown that people tend to eat about the same weight of food each day. So, choosing foods with a low energy density — those that have the smallest number of calories in the largest portions — will mean that fewer calories are consumed without sacrificing satiety. Consider, for example, grapes and raisins. Essentially, raisins are dried grapes. In terms of weight and volume, 100 calories of grapes are more food — and more filling — than 100 calories of raisins.

Foods that are less energy dense tend to have lots of water and fiber, such as fruits, vegetables and soups. According to Rolls, someone who wants to lose weight should consume foods that have an energy density that's lower than 1.0. Using the previous example, grapes have 6.7 calories per gram, which is an energy density of 0.67; raisins have 30 calories per gram, which is an energy density of 3.0.

Volumetrics is a simple, practical, healthy and effective way to choose foods. **FM**

Does hydroxy methylbutyrate increase strength?

A relative newcomer to the supplement ranks is hydroxyl methylbutyrate — which, thankfully, goes by the letters HMB. It's a metabolite of leucine (a branched-chain amino acid). HMB has been promoted as a supplement to increase strength and lean body mass, supposedly by preventing the breakdown of muscle tissue. This, however, has no scientific proof. One study did support the theory that HMB may prevent muscle damage; however, the study didn't examine whether HMB increased strength or lean body mass. In a study that did look at this aspect, subjects who received HMB increased their upper-body strength more than subjects who received a placebo, but the same wasn't true for their lower-body strength. Plus, a supplement company sponsored the study.

Research on HMB has found minimal performance enhancement in untrained individuals, and almost none in trained individuals. In a study that involved 26 collegiate football players, HMB didn't produce any performance benefits. It appears as if HMB is safe when taken for eight weeks or less. **FM**

Are split routines better than total-body workouts?

The split routine is a method of training popularized by bodybuilders and competitive weightlifters. With a split routine, the body is divided — or "split" — into different parts that are trained on different days.

Despite the popularity of split routines, they are no more effective than total-body workouts. In one study, one group performed a split routine consisting of four workouts per week (two for the upper body and two for the lower body), and another group performed two total-body workouts per week. After 20 weeks of training, both protocols were found to be equally effective in improving maximum strength, increasing lean body mass and decreasing body fat.

Any routine can be productive as long as it encourages progressive overload and provides adequate recovery. It's the latter area in which split routines often fall short. Even if only part of the body is trained in a workout, energy systems are used from throughout the entire body to provide metabolic support for the anaerobic efforts. If a workout is performed the next day, those energy systems haven't had adequate time to recover — even if the workout involves a different part of the body. The researchers in the aforementioned study noted that performing fewer workouts per week in the weight room, "would free more days for recovery or other types of training." **FM**

Do you have questions that you need answered? Email them to edit@fitnessmgmt.com.

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