

Exercise and Energy Production I

It is important for us as martial artist to learn how to train SMART as well as understand how our bodies process energy for engaging in specific movements such as walking, jumping, jogging, and skipping rope. Simply, what happens when you move? Why do you get a moment of sudden fatigue during exercise and then recover immediately?

In martial arts or any kind of exercise, muscles flex and extend to make bones move. To exercise successfully, the body must produce the right kind of energy to fuel the muscles. Without that fuel the body will slow down, falter, and refuse to perform.

THE THREE ENERGY SYSTEMS

There are three energy systems

- 1. System I is the start up
- 2. System II is the three minute power system
- 3. System III is the endurance system

The three energy systems in the body handle different demands, depending on the intensity of effort and endurance required. These energy systems work in sequence with some overlap. In other words, it is like switching gears on a standard vehicle. You switch into each succeeding energy system when and if the body needs the next energy sequence for the activity itâ€™s performing. Making these energy systems perform at their peak is what improves physical performance. The interaction between these systems explains and adds understanding to why you may experience sudden fatigue during physical exertion and how your body benefits from warm-ups.

If you are interested in pursuing this knowledge, pulmonary test laboratories or fitness research laboratories measure every facet of physical fitness, from how much oxygen you can breathe to how strong your heart is and how much energy your body can produce.

Energy is key within the body for muscles to move. Without energy, the physical movement required for any activity would be impossible. Even for the simplest act, such as blinking or picking up a spoon.

Every time you exercise, your body uses a mix of oxygen and nutrients to make chemical reactions that produce the energy you need to move. In other words, the better the mix, the more efficient your body can create energy. With a proper diet and exercise, over time youâ€™ll develop a large scale energy producing network throughout your body. This makes possible the amazing physical achievements we marvel at in Budo. From breaking blocks of ice to breaking banana trees with our shins, 8-10 feet high vertical jump kicks etcâ€™!

In the following week, we will begin to explore how these chemical reactions occur during exercise, and how they can help you develop your physique.