

INTRODUCTION TO

“ THE RACHAEL BODY INVERSION EXERCISE ROUTINE” ©

“THE ULTIMATE PHYSICAL CONDITIONING FOR ATHLETES AND SERIOUS FITNESS ENTHUSIASTS”

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The Rachael Inversion Exercise Routine and the Motorized Inversion Machine employed is a copyright and a patent No.7,303,517, of Ideas For Sale, Inc. They were designed by Raffaele M. Pandozy, Ph.D., inventor of other several fitness equipment, researcher, designer and founder of Core Fitness System.

My name is Dr. Pandozy, the findings and benefits that have emerged out of my studies and research in body inversion exercises and embodied in the “Rachael Body Inversion Exercise Routine” and the Motorized Inversion Machine, which deliver “the ultimate physical conditioning” of the body in the inverted position as opposed to the standing position.

There are four interrelated leading fitness objectives that all physical exercise programs should pursue in order to obtain safer and greater physical performance of the human body in sport and fitness activities:

1. Produce efficient mental work to direct more energy to the nervous system for the exercise as voluntary and determinate movement of the body;
2. Convey greater blood supply from the heart to the muscle fibers to produce power, stamina, endurance and greater performance;
3. Free the exercise from negative stress and render it more fluid by performing the exercise under a decompressed spine, correct posture and full stretch of the body.
4. Enhance the health of the spine and joints, which includes maximum cartilage and disc flexibility.

I promise that by following the principles that support these four objectives, better performance in sport and fitness activities is obtained. That is why he calls the Rachael Inversion Body Routine Exercise, “the Ultimate conditioning”, and recommends it to all sport and fitness trainers of the world.

These four objectives embody in part the Dr. Fredrick Alexander’s postural technique. They are obviously causally related. I envision them as one comprehensive and concentrated “core action” that synthesizes intentional body movements. The main point to keep in mind is that all body movements can yield greater results if managed under “spinal awareness”. Spinal awareness establishes the mind doer’s full presence and participation in the exercise. It assures the delivery of maximum energy to the muscles. The energy to the muscles is delivered by the mind to the spinal cord and passes through to the entire nervous system, which activates the entire muscle structures of the body. This core action is an important aspect of the inversion routine exercise for it achieves greater control, greater promptness of nerve reflexes, greater muscle power and an overall increase of sport and fitness performance estimated at 20%.

The simple explanation of spinal awareness emerges from analyzing the anatomy of any physical exercise. One must distinguish between voluntary and involuntary body movements. A physical exercise is a voluntary movement initiated by mental commands and carried out by the nervous system, as

opposed to the involuntary movements of the automatic reflex-arc, such as organ movements, which are carried out by purely somatic muscles.

A voluntary exercise is most effective when the mind is trained to convey maximum energy to that part of the body to be exercised. This is to say that muscle power much depends on mental powers. The command is recognized in biology as “spinal motor neuron acceleration” occurring through a chain manifestation of synapses in the spinal cord, which can be exercised and improved substantially.

Thus if all exercises begin with an intention, the mind presence during the movement is what controls, corroborates the command and releases the inhibitory neurotransmitters (glycine) onto the motor neurons that stimulate the “efferent” nerves and that initiate skeletal muscle’s performance.

Performance depends primarily on the power of mind’s intention, to control the production of certain chemical natural amino acids and “nitric oxide,” which provide oxygen to expand fiber structures and develop greater forms. The essential basis for muscle growth is to enhance the flow of metabolic adaptation.

The Rachael routine is most effective in enhancing muscle power and form because it applies the fundamental principles of muscle dynamics and performance depending primarily on the mental participation of the individual doer as a generative and controlling mechanism. It applies the understanding that optimal exercises are those designed to fulfill the full range of muscle dynamics, which consist of traction, contraction and torsion and that produce positive agonistic force over negative antagonistic force. The last thing that an athlete or a fitness practitioner desires is to develop sets of muscles that obstruct the normal blood circulation and the lymph of other organ functions.

The Rachael Routine is most effective also because it is performed under a full stretched position. This is another important aspect of the routine because it produces maximum fiber traction of all tissues, muscles, nerves and cartilages. Complete flexibility, total decompression of the spine, as well as an increased blood supply is obtained. The exercises are much smoother and more effective when friction negative stress are eliminated.

In addition, during the inverted position the spinal posture and the natural curvature of the spine is maintained which contributes to freer movements. A correct posture helps the performance of the exercise, but is also therapeutic and corrective for the majority of people who are not aware of it.

Spinal awareness requires practice, silence, concentration and visualization of the movement. An Olympic high jumper for example must visualize and see himself producing the full sequence of the movement from running to the final lift of the hip to get the torso and the legs over the bar. It is a fact that fitness centers are designed very much to entertain rather than to train the mind of fitness goers to concentrate on their exercises more effectively.

The vertebral column is the central support system and the systematic decompression of its vertebra is a healthy practice to assure flexibility, natural curvature toward the health of the inter-vertebral discs, which need to be maintained elastic in order to be refurbished with new fluid. The inter-vertebral discs perform as shock absorbers and prevent spinal injuries. Balance, control, prompt and effective responses especially in sport and fitness activities depend on a healthy spine. My motto has been from 1998: “A flexible spine is a healthy spine”.

Spinal cord awareness requires maximum concentration and anatomic visualization delivering greater neural current to the nerve system. This is simply explained by the efferent tendons responding to mental synapses produced by the neural current. The tendons are parts made of collagen fiber like the rest of the somatic nerve system. They connect muscles to the main nerve systems, like the sympathetic

and the para-sympathetic, and are arranged in bundles to stimulate same muscles that move the skeleton. The direct connection of the nerve fibers of these muscles respond proportionally to the power of the doer's intention, which governs the synthesis and concentration of energy production of ATP (Adenosine triphosphate)

Tendons have a certain elastic capacity and are the embryonic progenitors of skeletal muscle cells that are cylindrical and elongated in shape, formed by multinucleated cells capable of producing work in more or less accelerated form. Chemical and physical energy production depends on the body's response system to produce optimal conditions for traction and contraction constituting muscles power and volume enhancement. Although neural energy is produced on casual demand, intention is the initiator and it is what provides the initial energy, which makes any exercise primarily and essentially mental. In other words, in every exercise it is the body obeying the mind's will, not the other way around.

The ultimate question thus before Dr. Pan dozy as a designer was how to increase mental powers to stimulate growth of certain skeletal muscles cells, that is, how to induce the body to stimulate production of "oxygen binding proteins (myoglobin) to provide extra blood load carrying (troponin) calcium producing power and endurance to the muscles.

The Rachael routine does precisely that. It first induces the doer to mental concentration as a matter of mental practice and mental exercise, which stimulates the chemical production of calcium ions necessary for muscle contraction, (along with the production of actin and myosin, troponin and tropomyosin) to complete the movements. Concentration and visualization of the moving body is a part of the development of spinal cord awareness that delivers high levels of neural power and blood supply to the muscle. It is on this principle that the "ultimate conditioning" is achieved.

Obtaining spinal awareness can be related to the "Kundalini Yoga". Maximum conveyance of neural power to a particular part of the body is obtained through concentration and visualization of the conveyance. The difference from the Kundalini here is resting on muscle enhancement rather than on therapy. However, it is no surprise that certain ancient people, such as the Sufi practiced mental yoga as a method of self-cure. The ancient Sufi were right in believing that neural energy can be conveyed, as I think I am right in believing that the same energy produces muscle power and form enhancement.

Maximum neural conveyance is obtained under intense concentration within the doer's mind without loud music or any other kind of entertainment. Neural energy can be conveyed to the muscles that the exercise engages and enhance power, stamina and endurance. Although after the exercise a 30 second pause must be observed to allow the muscles of the body to relax for fast recovery. This means that after completion of the exercise, the doer is greatly energized, instead of feeling tired as it normally occurs in regular standing exercise practices.

Rarely any exercise produces the entire movement of the targeted muscle. It is important to recognize that the Rachael Inversion Exercise Routine by starting from a long stretch has greater effect on the efficient skeletal muscle cells: the type 1, (called slow twitch) which can perform long work duration capable of generating ATP and stimulate oxidative metabolism over longer periods of time; and type 2 (called fast twitch), usually comprising more efficient cells, using both oxidative metabolism and anaerobic metabolism for quicker response.

In substance, the Rachael routine is altogether a whole new way of putting together all the positive aspects of exercising the body, which takes in consideration the fact that while certain groups of muscles contracts others relax and lengthen and their fiber as a natural dynamic voluntary movement respond in conformity with the type of fiber structure.

Only special exercises produce the full effects of the entire muscle dynamics. To extend the

fibers of, the smooth, the cardiac and the skeletal muscles to their maximum length means to assure maximum blood supply for greater performance, endurance and faster recovery.

Michael J. Alter's book, *The Science of Flexibility* offers numerous studies proving that during inversion gravity exercises the flow of blood (leucocytes) into muscle fibers naturally increases between 55 and 65%. Besides gravity the momentary increase of systemic blood pressure does not increase with notable advantages, as reported in the *Journal of Exercise Physiology Vol. 7, 8/4/2004*, and the pulse rate decreases, virtually eliminating possibilities of heart failure.

The Rachael routine represents a tremendous exercise for the heart, which, being a muscle, is forced to increase ventricular contractions as per the Frank-Starling Law, convey more blood and equalize its flow in the circulatory system.

Dallas, Oct. 7, 2011
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