

## **CAN ROLFING® HELP YOUR RUNNING?**

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What good are the best running shoes, clothing, digital watches, individualized diets, energy supplements and specialized training routines if the human body - the vehicle of performance - is not organized to achieve its most optimal level of efficiency? What if your greatest obstacle to enjoyment and maximum running performance is your imbalanced body? Why have your body work against you as you run, when its patterns can be reorganized to take full advantage of mechanical and gravitational forces that influence human movement?

A system of body work already exists that can make dramatic changes in a person's structure. Developed by Ida P. Rolf, Ph.D., this body technology, known as Rolfing®, involves body manipulation and movement education. Rolfers are trained to realign the body into its optimal organization. Rolfers believe that the shape of the body reflects how well it is operating and how well lined up (balanced) it is with the field of gravity. The general goal of Rolfing® is to bring the various segments of the body (head, neck, torso, pelvis, legs, and feet) into balanced and supportive relationships with one another.

Klaus Weber began his Rolfing® sessions at age 40. "I feel 100 percent better since my Rolfing®, and I've achieved new personal records in almost all distances," he says. "Running is so effortless now it almost seems more like play than anything." In the 100K that Weber ran this summer in the mountains of his native Switzerland, he knocked an incredible one hour and 39 minutes off his previous personal best. Weber also competes in national cross country skiing in the masters division. He reduced his time in the 50K race by 15 minutes 38 seconds only three months after his tenth session of Rolfing®. This is a very rapid rate of improvement, as it usually takes the body a good six months to fully integrate the changes and adjust to the new and improved alignment. In the October 1984 Tour of Albuquerque Marathon, Weber finished second in the 40-49 age group while averaging 6:50 per mile. This was an 11 minute improvement over his 1983 time.

### **Structural Changes**

Rolfing® can bring about fundamental changes in body structure because the connective tissues of the body have a highly pliable quality. These connective tissues wrap around all muscles and connect muscle to bone and muscles to each other. Connective tissues give the body its form. The Rolfing® uses his hands to stretch the shortened connective tissues back to their normal length and consistency. The repositioning of body segments assures that the legs line up and are supported by the feet, the pelvis is centered atop the legs, the torso rides comfortably upon the pelvis, and the neck and head are evenly balanced on the upper torso.

When the body segments begin to assume their normal position, an immediate improvement in function is noticed. Proper alignment gives the appearance and feel that the body is gliding along rather than overworking with each step. In an aligned structure each body part is able to perform its own job more completely because it is no longer compensating for the imbalances of the whole body. In such a system, gravity works as a supportive and uplifting force through the body.

In an unbalanced body, we have a system fighting gravity that must be held up by muscular effort, whereas in the balanced structure we have a body in harmony with gravity because it is supported by proper alignment. The more this balance condition is achieved, the more we are able to use the body to its maximum benefit.

A typical first visit to a Rolfing® would probably begin with the filling out of a health questionnaire, having photographs taken (client dressed in underwear) and then a structural evaluation of the client's body patterns from the perspective of Rolfing®. The client then lies down on a cushioned table, sits on a bench, or sometimes stands while the Rolfing® uses his hands to stretch and loosen the connective tissue that has hardened and bunched up and no longer allows the neighboring muscles and joints to move as freely as they could.

The client may feel a localized or general burning sensation as if the skin were being stretched too far. This only lasts while the tightened tissue areas are releasing. Soon after, the client usually reports a sense of warmth, length, lightness, tingling sensations and new freedom in the area worked on as well as in surrounding areas as the changes spread through the connective tissue network. Clients report

greater ease in movement and breathing, as well as improved balance and stability.

Initially, clients receive a basic 10 session series of Rolfing® sessions. This gives the Rolfer an opportunity to work systematically and comprehensively increasing the bound up and inefficient muscular patterns in a person's body. Many clients elect to return six months to two years later for the follow up sessions that focus more closely on specific structural and movement problems.

### **Observing bodies**

As a Rolfer, I am a continuous observer of the structure of the human body. I am interested in the way people's bodies are organized and how they interact with the field of gravity. A 2 1/4 mile train around a golf course has become the most popular running spot in my city. People of all ages, shapes and sizes can be seen jogging and running at nearly any time of the day or night.

As I watch these people completing their laps, my eyes are drawn to how well the various segments of their bodies (feet, legs, pelvis, torso, shoulders, neck and head) stack up or support each other during movement. Sometimes I'm treated to viewing beautifully balanced bodies moving with grace and efficiency. Unfortunately, what I see most of the time are unsupported and mechanically inefficient bodies working too hard in an attempt to compensate for imbalance. It's as if people are running against themselves rather than with themselves.

### **Imbalanced Pushoff**

Let's examine some specific examples of structural imbalance in running styles. Starting from the ground up, I see lots of runners whose feet do not hit the ground evenly. This defect causes an imbalanced pushoff and requires the ankle, knee and hip hinges to compensate by twisting, shortening and working harder than they need to. Very seldom do I see runners whose feet and legs track relatively parallel. Most often, I see feet turned out too far (duck feet) or turned inward (pigeon toed), which wastes energy and alters the length of the stride. With only a three degree inversion or eversion of the foot, a 2:50 marathoner would expend extra energy required to travel an extra 2.65 miles. Many people only run on the toes with the ball, mid-sole, and heel never striking the ground unless they get very tired. These runners are unable to take advantage of what I call the "power connection", the most optimally efficient line of force direction in the foot, which runs from the medial aspect of the big toe along the plantar tendon to the inner one-third of the calcaneus (heel bone). Use of the "power connection" results in the most pushoff and forward thrust for each foot placement and ensures the proper transmission of the mechanical action up through the entire leg.

Many runners exhibit a shuffle style of movement that suggests they are kicking a ball closely in front of them. The hips are rigidly held, and the lower leg is stiff, with very little knee flexion. Other people run around with pelvis (women show this more than men). The legs swing out and around in a half arc before they begin a forward direction. Such runners have a very narrow tracking pattern and will often scuff the front inside edge of their shoe into the opposite foot.

In another common pattern, the runner is bent over at the waist and sunk into the pelvis as if carrying a sack of potatoes across the upper back and shoulders. The opposite of this pattern is the runner whose head, arms, and shoulder girdle are held high and back (At attention), which shoves the middle back (between the shoulder blades) and the lower back forward, giving a bowed shape to the body. These runners usually have an unnecessarily high knee lift. When one views them from the side, it appears as if they are running upstairs. In either of these extremes, the "collapsed" or "held up" patterns, excessive energy is being used to maintain the imbalance and still move the body forward while running.

The running style I see most often involves no integration between the upper and lower halves of the body. To a Rolfer, such runners appear - cut off at the waist - the top half doesn't know what the bottom half is doing. They don't support each other's movement during running. This pattern is often characterized by the leg lifting too high before moving forward because the deeper muscles of the thigh, groin and abdomen are not being used properly during each leg swing. There is often excessive arm motion crossing the body's mid-line and creating mechanical drag on the system during each step.

Of course there are many other patterns of structural imbalance, including torso rotated in one direction and hips rotated in the other, and foot plants that actually cross over each other with each successive step. There are also very unique breathing patterns that use only certain portions of the lungs when taxed and those that never fully exhale, which creates negative pressure in the whole respiratory cavity.

The point to remember is that each pattern represents a adaptation or compensation from the normal structural balance that significantly reduces performance, increases the possibility of injury, and accelerates structural deterioration (aging) of the body. The second and most important point is that these imbalances can be systematically changed and new body alignment can be evoked, resulting in a balanced, graceful and significantly more efficient style of running. For runners concerned with levels of performance, this means a incredible opportunity for personal improvement.

### **World Class Runners**

Alberto Salazar, the world class marathoner, has a running style combining aspects from two of the previously described patterns. His problem really begins in the pelvis. Salazar has "pigeon hips" that create "pigeon toes" (feet). The heads of the femurs (upper leg bone) are inwardly rotated at the hip socket, shortening the groin and rolling the legs inward. Each step he takes compresses his body structure more deeply into this pattern, shortening the lumbar spine and pulling the waist (lower abdomen) down into the top half of the pelvis while jamming the upper thigh into the bottom portion of the pelvis. This creates a log jam at a critical place where he needs more range of motion in flexion and extension of the hip.

Salazar's structure gears out the use of the deeper iliopsoas complex and makes him rely too heavily on the surface abdominal, groin, and thigh muscles, which further contributes to the shortening in the front of the body. From a functional point of view, the legs cross the pelvis and extend to the bottom inner surface of the ribs via the psoas (pronounced sew-as) major, psoas minor and iliacus muscles. These muscles collectively form a bridge between the legs and upper body so that imbalance and compression in the rib cage, waist and pelvis ultimately reduce the range of motion and efficiency of the legs. When the tone and span of the psoas are properly balanced with the surrounding muscles, the hip hinge will function properly, as leg movements are able to transmit all the way to the spine. With a balanced psoas the knees will track more parallel and straight ahead. This change eliminates rolling or jerking gaits that have excess side-to-side movement impeding the intended line of travel.

Salazar appears to be running up a slight incline - "leaning into the hill" - when, in essence, what he is doing biomechanically is running into the ground and compressing his torso deeper into his pelvis. Accentuating the bent-over look. What Alberto needs is not more mileage or speed work: he needs a complete overhaul of his musculo-skeletal system so as to run in harmony with gravity rather than against it. This kind of intelligent repatterning of his body would contribute more to improved efficiency and performance than any other improvements (dietary, training or equipment) he may focus upon. He runs farther with more effort per step than is necessary because of these two main musculoskeletal imbalances. Salazar 's condition and resultant performance could be improved dramatically with integrated structural change that Rolfing® could bring to his body.

Unfortunately, the technology and foundational principles of Rolfing® are still unknown to most world class runners. When it finally breaks through, we will observe dramatic changes and improvements in running styles and times as well as a significant reduction in chronic injury patterns that have a musculo-skeletal component.

Some time ago I was watching a marathon on television. There were about nine runners grouped together in the lead pack for nearly the first three quarters of the race. This was a wonderful opportunity for me to observe the styles of several world class runners at the same time. Of course, each had his own unique structure, which dictated to a great extent the style of running exhibited. But from a Rolfing® perspective, all these runners had one thing in common: each was not using his body to maximum benefit. Each runner showed a high degree of mechanical inefficiency and significant structural imbalance. If each was to achieve greater structural balance with all body parts working in harmony, there is no telling just how much greater his performances could be. Rolfing® is not a form of primary health care and should not be used as a substitute for regular medical treatment. People who do come to Rolfing® with specific problems have exhausted traditional medical options or they have been referred by a physician for improvement of their musculo-skeletal condition. Rolfers don't focus on trying to "fix" isolated areas or relieve localized pain. These improvements just happen naturally if the entire structure is balanced - which, of course, is the primary goal of Rolfing®.

If a person has an injury or a recurring structural problem, he or she is encouraged to seek appropriate medical attention for an accurate diagnosis of the condition. After this step has been taken, Rolfing® is often suggested as a viable option for addressing the specific condition in the context of rebalancing the

entire body. Because of increasing evidence of the success of Rolfing®, more physicians are referring their patients to Rolfers for help with musculoskeletal problems.

What are some of the specific running benefits that can be brought about as a result of your body improving its balance and alignment from Rolfing® sessions? You should experience a more optimal foot plant and push off as your feet will be hitting the ground more squarely. Your muscles will be activated in a more appropriate sequence to reinforce effective mechanical motion through the lower leg, knee, upper leg and pelvis during each step. This change will ensure that your gait length is more appropriate to your structure, thus eliminating over or under striding. This change also reduces leg and foot fatigue, as each component does only its right job in the proper sequence. With all the joints lined up and working as effective shock absorbers, you will be able to limit the inevitable long-term structural deterioration that results from the percussive / compressive effects of running. With less compensation taking place in the body, there is a decreased potential for nagging injuries (shin splints, heel pain, fascial strain, stress fractures, and tendon problems) that sooner or later beset people who run.

### **Physiological Improvement**

When your connective tissues are healthier and have appropriate levels of tone, certain physiological improvements would be experienced. Fluids will flow more easily, nerve impulses will be conducted more smoothly, thus creating a more effective motor response. Breathing will be easier, and waste product removal will be more efficient. Overall, one should find less random movement, as structural integrity is maintained and efficient motion is promoted during running.

Rolfing® has even helped people who would never even think that they might be able to run. Jim Hagerman came to be Rolfed when he was twenty-seven. He had suffered from chronic asthma all his life. After his seventh session, Jim tried some jogging and noticed that his breathing was much improved and the painful constricted feeling in his chest was almost completely gone. Three months after his tenth session Jim was running two miles, three times a week. Jim returned for some follow-up sessions about nine months after he had the original ten sessions of Rolfing®. He reported that he was now running six miles a day, four times a week at a 7:30 pace. Before Rolfing®, he would be gasping for air after walking up a small flight of steps.

People do not come for treatment for asthma. In the case illustrated it just so happened that alleviation of asthma symptoms coincided with the Rolfing® sessions which are primarily focusing upon structural order and balance.

If you are interested in improving the level of structural balance in your body and enhancing your performance, I invite you to contact a Rolfer and Rolfing® Movement Teacher in your local area for a consultation. They will provide you with an accurate assessment of your structural balance and discuss with you the impact this has upon your running efficiency. Give it a try, you've got nothing to lose and a lot to gain.