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Rolfing® from a Biodynamic Perspective

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This article was written in 1982 while I was on the staff of Sports Medicine Resource in Brookline, MA. Adapted from an article by the Rolfer Roger Pierce, PhD, it is a good explanation of traditional Rolfing.

Rolfing®: Reorganizing the Human Structure

It is a basic belief that except for the hard-won improvements gained through strenuous exercise, our bodies can change in only one way--for the worse. Expressions like "over the hill," and "you gotta work with what you got" deepen this perception. Recent research, however, is beginning to show that significant structural changes in the human musculo-skeletal system can occur.

Look at any person walking down the street and you will notice the imbalances: the shortened body, the head slumped forward and buttocks carried up and back. Most likely this body has twisted as it has slumped; one shoulder or hip may lead the other in movement. Knees may track in or out and misaligned ankles may throw the weight to the outside of the feet. One foot probably carries more weight than the other. Or another: ramrod straight, but unconsciously stiff and rigid. One foot goes directly forward while the other points fifteen degrees to the left.

The consequences of a disorganized body affect every part of it. In this illustration, the forward tilt of the pelvis has deepened the curve of the lower spine, spilling the abdominal contents forward. The ribcage has compensated by inclining backward and the head by dropping forward. The upper chest is flattened and respiration constricted. None of the components in this pattern can be significantly altered without changing all of them.
How do bodies become unbalanced? From a purely mechanical perspective, distortions are the result of the musculo-skeletal system's tendency to be remodeled by applied force. The primary force comes from repeated movement patterns: the way individuals use their bodies to sit, walk, work, and sleep. These patterns, which are generally established in infancy and may begin with genetic predispositions, draw heavily on parental example and on other environmental factors like diapers, shoes, and school desks. Inefficient patterns of behavior set themselves in the muscular-fascial network as unbalanced patterns of structure.

Distortions enter our bodies through accidents: an early football injury that twists a knee causes a limp for a few weeks. The shifting of weight to the strong leg restructures the play of muscular effort not only in the legs, but through the pelvis, up the spine, eventually through the whole body. Although the limp seems to disappear as the knee strengthens, the system of compensation leaves its imprint in a broad, complex pattern of distorted tissue.

These patterns of imbalance tend to reinforce themselves; they feel comfortable and natural--balanced, in fact. Over the years they deepen by repetition, the weight centers move further and further away from their more efficient, vertical axis. Eventually a point occurs where someone exhorts us to "stand up straight, don't slump." Head up, shoulders back, we hold ourselves for a moment until once more we fall back into our pattern. We have grown that way.

The consequences of imbalance are surprisingly broad. If we picture the body as a stack of partially independent weight segments, the least energy will be expended in rotational movement when the blocks are stacked directly above one another. When this is not the case, both skeleton and musculature are forced into inefficient weight-bearing. The function of most muscles is to contract or release to bring about movement, and then to release again in order to prepare for new movement. When they consistently take on the weight-bearing function of bone, the fascial envelopes--the connective tissue which surrounds the muscles and helps to give them shape--tend to become hard and inelastic. Tightness spreads through the network; the body locks up and joints lose their freedom.

Joints lose their ease of movement not only from the tightening of fascial planes which cross them, but also from the fact that as the two body parts that relate to one another through the joint lose the intergrity of their relationship, the articulating surfaces of the joint itself do not meet in a way appropriate to their structure. If the bones of the lower leg, for example, are twisted outward and the bone of the thigh inward, a common situation, the knee is likely to be troublesome or unstable. The movement of the knee--indeed of the whole body--will lack the grace which comes of movement that is appropriate to the structure.

Circulation is restricted as the body tightens because the vessels run in and through the fascia. Swayback spills the abdominal viscera forward into a protruding abdomen, changing the spatial relationships between organs and the directions of pressures on them. The depression of the upper chest, a consequence in part of the shifting forward of the head, limits abdominal and pelvic cavities, perhaps affecting function.

Bodies may also show imbalance of tonus between the voluntary musculature of the surface and the deeper, smaller, slower moving, and more reflexive muscles such as those which lie around the spinal column. Inability to lengthen the spine will tend to throw the deeper muscles out of use.

The Rolfing technique, named for the physiologist Ida Rolf, restructures the myo-fascial-skeletal system by taking advantage of the fascia's tendency to hold shapes induced by applied force. The process takes place in a series of sessions lasting about 75 minutes and spaced a week apart. The Rolfer, through soft tissue manipulation and neuro-muscular repatterning, reduces the randomizing influence of the environment, moving tissue closer toward symmetry.

Consistent misplacement of weight anywhere in the body evokes a compensatory pattern of tightening throughout the myo-fascial system. For example, the forward slump of the head of the woman in the illustration above is directly related to the tilting of her pelvis and the locking of

her knees, to select only three parts from the pattern. Relief given by freeing either neck or knees alone would be temporary because other parts of the pattern would later force the relieved part to function in harmony with them. For that reason, the Rolfing practitioner looks at the entire structure and works to rebalance it.

The Rolfer must apply sufficient pressure to stretch and move tissue; furthermore, he frequently works in tissue whose chronic tension has an emotional component. Chronic muscular tension results in a distortion of fascial structures, the muscle within its fascial sheath may be disrupted in both shortening and lengthening. These restrictions may then affect not only the way a person moves, but also how he or she feels. Imagine for a moment a person who is "uptight," or "steely jawed." These body language descriptions have a physical reality.

The results of Rolfing are as varied and complex as the structures being reordered. Sue Turner, writing for swimmers in Aquatic World Magazine, drew these general conclusions: "After Rolfing, movements were smoother, larger, and less constrained. The movements were less extraneous, with a decrease of motion in areas not directly related to the action. Movement was more dynamic and energetic. Carriage was more erect with less obvious strain to maintain position. Buoyancy improved in synchronous swimming with strokes easier, smoother, and with less muscular fatigue." Valerie Hunt, Ph.D., who conducted a larger study at UCLA's Movement Behavior Laboratory, has confirmed and enlarged upon these findings, as has Dr. Julian Silverman at California's Agnews State Hospital.

Obviously not a panacea, Rolfing can sometimes be very beneficial. At Sports Medicine Resource, Inc., I see people with: chronic back, neck, hip or knee pain; gait problems, especially where there seems to be an imbalance in walking or running; musculo-skeletal complaints which have a postural element; post-operative restrictions in movement; dysfunctions which seem to have an emotional component, bodies which seem rigid, tense, "thickened," or depressed; the healthy individual or athlete who wants (or needs) to feel more at ease physically, who is working to increase speed, accuracy, and balance.