What Structural Integration (Rolfing) Is and Why It Works

by Kalen Hammann, Ph.D.

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Recently an increasing number of people have been seeking new ways to enhance their own and others' ability to function as full human beings. Excited by the notion that their lives might be incomparably richer as a result, these people have flocked to "growth centers" like Esalen Institute, have bought thousands of books like William Schulz' **Joy** and Fritz Perls' **Gestault Therapy Verbatim**[1], and have spent countless hours practicing individual and group disciplines such as Zen meditation, various forms of yoga, and encounter.

One of the most recent approaches to gain widespread interest (especially since an article describing it appeared in **Psychology Today** in October, 1970[2]), is Structural Integration. Although a lot of people have now heard of Structural Integration, most of them have only a fairly foggy notion of where it came from, what it's really like, what its underlying assumptions are, what it does, and how it's similar to and different from other ways of fostering human well-being. (That sentence you just read is an outline for the rest of this article: I'll be focusing on each of those questions in turn.)

A Young woman named Ida Rolf (she's now in her 70's, and though she answers to "Grandma" she's *still* young) developed the physical therapy now known as Structural Integration over half a century of quiet study and experimentation. It's characteristic of her that she began not out of a desire to found a "school" of therapy but rather out of practical concern for people who were in trouble and whom no one else could help.

On one occasion she was in the backwoods with another woman when her friend sprained an ankle. She has said that figuring out how to "fix" that ankle was her first experience of "rolfing."*

1. Perls, Frederick S. **Gestault Therapy Verbatim**, *Real People Press, Lafayette, Calif., 1969*

2. Keen, Sam. *Sing the Body Electric*, **Psychology Today**, *Oct. 1970*

** Structural Integration has come to be known colloquially as "Rolfing." Hence a practitioner of Structural Integration, or a "Rolfer," is someone who "Rolfs" people.*

Longer-term concerns were with her son, who was a sickly child but seemed to have no "disease" or "illness" that any doctor (including osteopaths or chiropractors) could diagnose or ameliorate; and her own spinal arthritis confined her to a wheelchair she would never be able to do without, according to doctors.

Her work for a Ph.D. in biochemistry was of some help in her quest to learn how bodies might function better, but it was far from enough. She supplemented that work with painstaking observation of people, both in sickness and in health, and with at least one extended trip around the world to explore in depth every way of working with people that man has developed. Gradually, drawing on all she has learned, Dr. Rolf developed a way of her own which she has continually been refining.

The results have been impressive: her son has long been healthy; she has no need of a wheelchair; and many others, who have felt her strong fingers and elbows over the years, attest to the difference that contact made in their level of functioning.

The strongest impression many people carry away from watching Dr. Rolf work with someone is something on the order of "That poor guy sure looked like he was suffering!" And what they have seen certainly appeared to be a painful process: the "poor guy" was lying on a thin sponge mat on the floor, while Dr. Rolf kneeled beside him, stroked and pressed on various parts of his body with her stiffened fingers, her knuckles, and occasionally even her elbows. She seemed to be pressing *hard*, often leaning with her full weight. The man grimaced at times, and may even have groaned or cried out. When asked afterward, "Did it hurt?" he may have responded vehemently, "It sure did!"

What on earth was going on? Why should anyone want to submit to it? The man she worked on may have given the beginning of an answer. It is unlikely that he stopped with the "did hurt" statement. Most people in his position have gone on to say something like, "But at times, it also felt really good—like when I found myself able to breathe more easily and deeply after you worked on my chest. Even when it hurt, it often felt somehow like a 'good' pain—like something I needed deep down inside."

Part of the answer

The pictures Dr. Rolf took before and after the session may provide another part of the answer. Although the changes may have been fairly subtle, the pictures certainly reveal that after the session the man was standing "taller," "straighter," "more erect." In answering questions afterward, Dr. Rolf may have said that often such changes become quite pronounced over the series of 10 sessions which she usually gives.

She may have indicated that in the first seven sessions she works fairly "locally" on different parts of the body (the feet and ankles in one session, for example, and around the neck in another); in the last three sessions she works "generally" (over larger areas of the body). She may have noted that where she focuses in the body in a given session and what she is trying to accomplish in that session, are the same for everyone she works on, but what she actually does with her hands (and what the person experiences—*e.g.*, whether it's a "difficult" or an "easy" session) depends on "what she finds there." It is different for each person.

Series of changes

Most important, at some point she undoubtedly explained that what she is trying to do within each session, and in a more complete way over the whole series of 10 sessions, is "to evoke a series of changes through which the body as a whole will come into better alignment—more balanced, more patterned (as opposed to random), more integrated, more nearly optimal for his functioning as a total being."

Structural Integration, then, is a series of about 10 sessions over the course of which one person manipulates another's body in systematic ways aimed at evoking a more nearly optimal alignment (a more "integrated structure").

Sound good? It also sounds like a lot of gobbledygook. I suppose you may well be wondering, "What does an 'optimal alignment' look like? Optimal for what—how is it supposed to help me? How do people get *non*-optimally aligned? How does having my body pushed around 'evoke' anything?"

Observations of facts

Actually, the assumptions on which Structural Integration is based are not so much *a priori* axioms as they are a set of observations of facts which are really "obvious" (which means that many people act as if they do not know about them).* The first observation has been made so often that most people seem to accept it as "part of the human condition."

1. *Most people do not function at a high level.* As she looked around her, beginning with her son, Dr. Rolf noticed that a great many people who aren't "sick" in any identifiable way are not truly "healthy" either—if by "healthy" one means fully, vibrantly alive. Apparently, the wounds and diseases doctors know how to treat are far from the only ills to which flesh is heir. She also noticed something else:

2. *Some adults, and most children, do function at quite a high level* of energy, excitement, and joyously effective involvement with their world. Since there are some adults like that, it can't be just aging *per se* that grinds us down. But since so many more children than adults seem fully alive, it must be that:

3. *Something happens over the years which impairs our functioning.* A great many people have observed this, and it has led them to an amazing variety of conclusions, from "authoritarian public schools are killing our children" to "overprocessed foods are slowly but surely doing us in." Those conclusions may have a good deal of truth in them, but Ida Rolf looked elsewhere. She assembled what she knew about people's physical structures and the ways they change.

4. *Each body exists in a field of forces to which it continuously responds in some way.* This is clearly true of physical objects, but because people act purposively, and because they experience themselves as "separate" entities, we sometimes forget that is equally true of them. The strongest force acting on most people — gravity — is so omnipresent that we are usually quite unaware of it, but that doesn't stop us from making almost constant adjustments which take it into account. We adjust, for the most part equally automatically, to countless other forces. This observation took on crucial importance with Dr. Rolf.

** I'm indebted for this lovely definition of the word "obvious" and for a number of other delightful and useful ideas, to Neil Postman and Charles Weingartner's* **The Soft Revolution** *Dell Publishing Co., New York City, 1971*

5. *The body changes with amazing plasticity according to how it is used.* Now this is quite different from the way most of us think of our bodies. In general, we picture our bodies as quite static, almost mechanical arrangement of girders and levers (bones), muscles to move the bones, etc. Occasionally we remember that the whole arrangement becomes larger as people grow up, or that fat may be added or subtracted (especially from certain areas) as a person gains or loses weight. Even then, though, we tend to think of the component parts (skin, bones, muscles, *etc.*), and the underlying *structure* (the relationships of arm to shoulder, pelvis to thigh, rib to rib, *etc.*) as remaining always the same. Yet we are also aware of the other side: we notice how quickly our skin changes color when we spend time in the sun, and we note the sudden growth of calluses on hands newly introduced to a shovel or rake. We are aware that muscles called upon regularly become stronger, while others become weaker through lack of use. If we're perceptive, we even notice the structural changes, too—as when a man who has stooped over his books too long finds it difficult to straighten up completely.

Use our bodies

What we are only very incompletely aware of is the fact that as we constantly use our bodies to adapt to (or to alter) the forces acting on us, our bodies themselves *continuously* change in response to the demands we make of them. When we sprain an ankle, we learn a new way of walking. But the new gait may lead weak muscles to become stronger, and previously strong muscles to weaken; it may lead to a slight lengthening of tendons subject to new strain, and a slight shortening of others suddenly gone slack, *etc.* If a person is in a psychological "climate" which leads him to feel and express (in how he holds himself) much the same feelings for an extended period—for example, if he spends most of his time thrusting out his jaw belligerently—he may find that some structures have lengthened and others have shortened to the point where it is difficult to express anything else.

Operates as a system

6. *The whole body operates as a system: changes in one part lead to compensating changes throughout all parts.* Though it holds true quite generally, this principle is perhaps easiest to see in our adjustments to the force of gravity. When a person stubs his toe and starts to fall, he throws out a hand "for balance" and makes other smaller adjustments in other parts of his body (far from the originally affected toe.) Similarly, our belligerent friend with his jaw perennially stuck forward must lean back with some other part(s) of his body to keep from falling on his face; as his jaw and neck gradually change, so will the parts he thrusts back. As those parts change, smaller changes will take place in whatever parts of the body they touch, and so on until "compensations"-some of them very tiny, but others quite perceptible-ramify throughout his whole body. The longer any pattern is maintained, and probably the more often it is repeated in a short period of time, the more such compensatory changes have time to take place. Since each change takes energy to "undo", the more such changes have taken place the more resistant the new structure thus created is to "giving up" the pattern.

This may explain why one can usually tell a friend by his walk or why people tend to become less "flexible" (some would say to develop "character") as they get older. It may help us understand why different people stand and sit and move so differently. But the principle takes on literally vital significance when we pair it with one last observation:

7. *Some changes make it harder for the body to deal with the forces acting on it.* That is important because it means that it is not a matter of indifference how our bodies change; we have already noted that for better or worse our bodies are always changing.

Once again our dealings with gravity may provide the clearest example of the principle at work. Because heads, shoulders, arms, etc., all have weight, a person standing must somehow support quite a load. He can do it basically in one of two ways. If the large bones in his body (tibia, femur, large lumbar vertebrae, etc.) are arranged with their centers of gravity one above the other (a plumbline dropped from the ear would pass through the shoulder, hip joint, knee, anklebone), those bones will serve as columns which will support the weight by themselves. Very little muscular effort will be needed to keep the bones balanced that way, and all will be lovely. (Dr. Rolf likens this desirable situation to a set of children's blocks piled in the most stable way, with the center of gravity of each block directly over that of the one below.) On the other hand, the body's large bones may *not* normally be aligned in this stable way. The head may be thrust forward, for example, with the shoulders leaning back to compensate for it. The abdomen (and hence the lower spine) may be forward. (This is very common—take a close look at the next person you see standing in profile.) In that case enormous muscular effort must be expended just to prevent the whole wobbly tower from collapsing: the neck and upper back muscles must tighten to keep the head from falling to the chest, and so on down the body (see sketches).

That effort is using up energy which would otherwise be available for other uses. More than that, it is asking many soft parts to do jobs they were not designed for (e.g., to act like bones.) Those parts accomodate, but at a price—they stiffen and harden, thereby losing their flexibility. (Check the tissue of your calves and shins and you may well find examples of what happens as a result; if not, think back to the last time you noticed some of the amazing positions children can get into without half trying and think about how it would feel if you tried to do the same.) The upshot is a diminished ability to respond flexibly, energetically, *appropriately* to new demands gravity and other forces may make.

If this sort of unhappy sequence can occur "in the normal course of events," imagine what happens following the innumerable falls, bumps, scrapes, and other traumas an average child encounters. "Thank goodness he wasn't hurt" (i.e., no bones were broken), we exclaim as we pick a child up, not realizing that as his shoulder becomes less sore

over the next few days strain is spreading throughout his body as other parts compensate for the slightly different way his arm now moves. Multiply these tiny strains by half a lifetime and you can begin to understand an uncle who seems to complain constantly of minor aches and pains, or an elderly relative who has "never been really well since that last fall."

As they go through the world doing what they choose to do and dealing with the external forces acting on them, then, people may use their bodies in ways that throw them subtly or grossly out of whack. Fortunately, Dr. Rolf realized that the above observations also make something else clear:

8. *Force exerted toward an optimal alignment, even if exerted only on the "surface" of the body, will ramify through the system and ultimately will evoke a better alignment in the whole body.* Not only undesirable changes, but desirable ones ought to spread out from where they are first made. In principle, one ought to be able to evoke a better alignment throughout the body by working assiduously away on a left knee, or his lower back, etc. In fact, though, to do so would take an incredible amount of time and energy, since whatever is wrong with his left knee or lower back is compensated for throughout his body, and all those compensations would be working against (trying to undo) any local changes in knee or back. Which now brings us to our penultimate observation:

9. *Work on the whole body is more effective than work on just one part, since local change is deeper and more enduring if it is preceded by work on more distant compensations.* As Dr. Rolf puts it more succinctly to her students, "Go where it isn't." That is, if there's a funny twist in the spine and it has been there for a long time, you can bet that if you straighten it, compensations all over the body will pull it right back out of line. (They probably will not pull it quite as far out of line as it was before, and they'll be "decompensated" at least a bit in the process, but your progress may be almost indetectable.) So work on the compensations first, then circle back to where things look most out of line. Indeed, progressing through the sequence of 10 sessions Dr. Rolf has worked out can be seen as a highly elegant, systematic way of being sure to follow this advice.[3]

That is all well and good, but it is not too helpful unless one knows how to tell the difference between "out of line" and "in line," between a "nonoptimal" structure and a more nearly "optimal" one. Dr. Rolf's observation here is deceptively simple:

10. *The body functions best when it is in balance.* In her own introduction to Structural Integration,[4] Dr. Rolf indicates that she first noticed this in connection with physical balance in relation to the earth's gravitational field. As we noted above, a person can best deal with gravity's pull on his body when his large bones are "balanced" with their centers of gravity one above the other, leaning neither forward nor back nor to the side. She quickly realized, however, that the principle is far more general: in order for those bones to *be* balanced above each other when a person stands or sits "naturally," pairs of muscles all over the body—extensors and flexors, intrinsic and extrinsic muscles, groups of muscles and tendons located symmetrically on opposite sides of the spine—must be in balance with each other as well. When they are, the body seems to function best not only in relation to gravity, but also in relation to all the internal and external forces acting upon it. Structural Integration, then, is a way of working with the whole body which aims to bring it into better balance at every level.

3. Hamman, Kalen: *How to Change Whole Systems.* **Bulletin of Structural Integration**, 2:4, 1970.

4. Rolf, Ida P.: *Gravity, an Unexplored Factor in a More Human Use of Human Beings*, available from the Guild for Structural Integration.

What does Structural Integration actually accomplish?

To date, few controlled studies of the effects of Structural Integration have been undertaken, although a number of studies are now in progress. As Sam Keen puts it:[5]

"The difficulties of evaluating therapeutic claims are legion. Most patients who have invested time and money in therapy will claim some improvement. To date, however, there is little research that will substantiate the subjective claims of any school of therapy. We have no evidence that will allow us to make conclusive judgements about the relative merits of psychoanalysis of behavior therapy. Subjects who have undergone Rolf processing, like the devotees of bioenergetics or the Alexander technique, claim substantial changes in posture, body flexibility, and awareness. Fortunately, research is now being undertaken that sheds some light on these subjective claims. Preliminary studies seem to indicate that Rolfing does indeed cause significant alterations in neural activity and brain functioning.

"Valerie Hunt, head of the Movement Behavior Laboratory at UCLA and a pioneer in the use of measurement of the electrical activity of muscles in the study of movement patterns, is completing a before-and-after study of 14 persons who have undergone Rolfing. She is using a telemetry pack that sends signals from electrodes attached to the shoulder, neck, back or hip to measure the duration and amplitude of neural activity involved in such simple movements as walking, lifting, sitting, and throwing. She has found that after Rolfing one performs these same acts with a shorter period of active muscle contraction. And the amplitude of energy expended is higher during activity and lower during passility.

"Work and rest"—Hunt's data suggest that after Rolfing there is less neuromuscular static, less random tension, and more efficient patterns of energy use. When the muscle works, it works; when it rests, it rests. Training in movement skills normally produces such an increase in the economy of energy, but in the case of rolfed subjects there was no training. Hunt suggests that Rolfing lowers the frequency spectrum of motor activity, which means that motor units fire in a smooth, rhythmical, asynchronous pattern. In these lower frequencies the controlling nerve impulse for the movement comes from the spinal cord. Thus, she interprets her data to mean that the controlling innervation (for the simple movements tested) is moved by Rolfing from the cortex to the spine. The full significance of this shift is unknown; however, Rolfing may reverse some of the motor patterns involved in aging, when motor acts tend to come under cortical control.

"Brain waves"—Julian Silverman, a research specialist with the California Department of Mental Hygene, has worked with a team of researchers on the same subjects (minus one) studied by Hunt. They have used a combination of electroencephalographic and computer

5 *Keen, Sam, My New Carnality,* Psychology Today, *Oct., 1970*

averaging techniques to measure brainwave patterns caused by light flashes of varying intensities. In addition they have administered a battery of personality and biochemical tests. In 12 out of 13 subjects the EEG average of evoked responses was significantly higher in amplitude and variability after Rolfing.

"Silverman says, 'The data from all our tests, combined with those from Dr. Hunt's study, seem to indicate that Rolfing creates a more open, rhythmic reaction to the environment and to one's own kinesthetic and proprioceptive sensations.' "

Hard data, then, are just beginning to come in, although the findings so far seem highly promising. What of the "subjective reports"? These haven't been collected in any subjective way, but at least the following can be said with some confidence:

1. *People do stand "straighter"* (without straining or "trying") after being rolfed than they did before. Pictures show it, they feel it, and their friends and relatives often comment on it spontaneously.

2. *People almost always notice physical changes that they like.* They describe these in various ways: "I never used to like my body, now I do." "I used to feel fat, even though I wasn't overweight. Now people ask me if I've lost weight, and even though I haven't, I do feel slimmer." "I'm amazed at how much I can get done now in so little time." "There's a hill I walk up frequently. I used to have to stop and rest half-way up, now I don't." "I just feel more comfortable in my body now. I can just sit, without squirming around so much." "I measured myself yesterday, and I'm almost a whole inch taller! When you're only five-two that makes a big difference!" (These are things people I've worked with have said to me.)

3. *Many people report feeling more "open," more "aware," more "in touch"* both with their own bodies and with the world around them. (This would make sense if Silverman's brain-wave findings are generally applicable.)

4. *Most people also show some degree of "favorable" psychological change.* I first became interested in Structural Integration as a psychotherapeutic technique when I heard Edward Maupin (a Ph.D. in clinical psychology from the psychoanalytically-oriented University of Michigan) say that he had rolfed someone for whom the series of 10 sessions "were the equivalent of a complete psychoanalysis, including resolution of transference!" The changes I have seen haven't been that far-reaching, and they varied greatly from person to person. Still, I have seen someone who was quite tensely competitive "ease up" to the point where he was much more pleasant to be with and I've seen many people come to feel more confident and "better about themselves" in general (not just physically).

Dr. Rolf maintains that "physical functioning and psychological functioning are just different aspects of the same process, so when one changes, the other must change."

At the same time, in part on the basis of accounts like the one quoted below (where Sam Keen describes how his "body structure" seems to have changed faster than his "character structure"), I believe that these psychological gains would be enhanced if a person being rolfed were concurrently involved in some kind of work explicitly thought of as psychotherapy. (My own preference would be Gestalt therapy, since it focuses directly on awareness of what's going on in one's total organism—"body" as well as "mind.")

It's more nebulous, but worth reporting, that a great *many people's "lives in general" seem to improve* while they're being rolfed. As Dr. Rolf put it, "They'll deny vociferously that Rolfing has anything to do with it, and they'll attribute it to anything else they can think of." (They do.) "But you'll notice that very few come to you with stories about how things are getting worse, and a good many talk about how things are getting better." (I have noticed that, and while I can't be sure that's what's going on, it seems reasonable that if people are getting more comfortable with themselves, are having more energy available, and are becoming more sensitively aware of what's happening around them, their relationships with other people and their ability to cope with problems confronting them *ought* to improve.)

5. *Some people seem to re-experience, and afterward feel released from, an early traumatic event.* Fewer people experience this effect than any described above (perhaps one-third of the people I've worked with, and usually just in one or two of the sessions). But when it happens it is frequently quite dramatic. When it does occur there is a great outpouring of emotion, sometimes but not always accompanied by vivid imagery. Afterward the person will say something like, "You know, what you were doing right then wasn't all that painful, but I felt suddenly so scared (or hurt, or angry, or whatever). He may go on to say, "It was just like when I..." or he may have "no idea what it was about." Most, but not all, of the times I've seen this happen, when there has been a clear memory, it has been of a *physical* trauma (like the time that big cart ran over my legs").

It may well be that sometimes we tighten against emotion that feels overwhelming and never remember to let go completely, instead carrying the tightness with us in increased tension (and decreased available energy and mobility) for years. If so, it would make sense that Rolfing is deep stretching and realigning which may provide release.

In describing his own rolfing Sam Keen provides a first-person account which illustrates most of the above effects:[5]

> **"After the...first hour, slight but unmistakable changes in my posture and stance began to be obvious. My feet made more substantial contact with the ground; my leg muscles seemed to be freshly lubricated; there were ball-bearings in my joints...**
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> **"As the rolfing continued, it became clear that I was the cause of most of my pain. Anxious anticipation, suspicion, and resistance made my muscles tensely rigid. I learned to relax, and most of the pain ceased.**
>
> **"However, my chest wouldn't yield. Each time a hand approached it I went into panic and felt pain. The disarming of the emotional-physical defenses in this area involved both memory and manipulation. In the seventh hour of processing, pressure on a muscle in my shoulder released a memory of childhood conflict with a person I loved deeply—a memory that had become encysted in my chest. I wept. The release of the memory, and the grief it occasioned, ceased the panic and tension that had made me unable to bear manipulative work on my chest. At the end of that first hour I was able, for the first time, to fill my lungs in one smooth movement.**

"With my release from this and other defense systems, I experienced new openness, ease, and expansiveness in my body. In fact, I feel that my body structure is looser than my character structure. My head holds, puritanically, that tension—perhaps even anguish—is necessary to creativity. Nevertheless, I find myself warming to opinions, persons, and events that not long ago would have raised my hackles. Something new is happening and my head will have to get used to it.

"There are other changes. I stand taller and straighter; yes, Mother, it does feel better. The daily pain that an old wrestling injury gave me is gone. Most important of all, I have a direct sensuous and kinesthetic awareness of my total body. I no longer need to consult a spectoral map to find my lower back."

How is Rolfing similar to, and different from, other approaches? Clearly, a complete answer to that question would take more space than I have here, and anyhow I am probably too uninformed and perhaps biased about the "other approaches" (I have never practiced others for very long) to give one. Still, the question arises so often that even a first approximation to an answer may help some.

1. *Western medicine (as practiced by M.D.'s, dentists, etc.)* is in a whole different ballpark. They know how to deal, and often quite well with gross physical trauma (e.g., a broken leg) and with a large number of identified "diseases" which seem to be caused by the invasion of various little beasties from outside the body. If you have (or think you may have) appendicitis, or pneumonia, or chicken-pox, go to a physician, not a Rolfer. If you're interested in better balance in your body as a whole (which may or *may not* help with any physical "symptoms" you have), see a Rolfer.

2. *Osteopathy, chiropractic, naturopathy, etc.* Unlike most M.D.'s, practitioners of these arts often engage in extensive physical manipulation of the body. In that respect they are more like Rolfers. At the same time, Structural Integration is different from all such manipulative approaches I know of (except massage—see below) in that it focuses on, and involves systematic work on, the body as a whole rather than on some part of the body (usually the spine). As noted above, in principle, working on just the spine might eventually result in better balance throughout the whole body (if the work were, in fact, aimed at achieving better balance; in practice, such approaches seem best suited (and it's my impression they are in fact most effective) to cases where there has been a *recent, localized* strain or injury. The theory of chiropractic for example, does assume that by affecting the spine one affects nerves which go throughout the body, and this is probably true. By doing so, however, it seems likely to me that one could at best improve the circulation, etc., in the parts served by those nerves, without thereby improving the structural balance of the body as a whole.

3. *Massage* does involve manipulation of muscles and connective tissue all over the body, but its aim is quite different from that of Structural Integration. While massage seeks relaxation of tension (and as a result, better circulation, muscle tone, etc.) as far as I know it never aims to *change* the way one muscle, tendon, or bone relates to another. It is a process of easing and refreshing, but not, as is Rolfing, of realigning the body.

4. *Programs of exercise,* in general, strengthen one muscle or group of muscles at the expense of overall bodily balance. This is so first because most exercises are only designed to be of benefit to a limited group of muscles (thereby bringing it out of balance with the rest of the musculature); second, because even when one engages in a series of exercises in which "the whole body" gets a workout, wherever two muscles can contribute to a movement (e.g., of the thigh) the shorter/thicker/stronger one will "grab" first and do most of the work, hence end up still stronger and farther out of balance with the weaker/thinner/longer one.

5. *The Alexander technique* (developed by F. Matthias Alexander and his followers) seems to aim at much the same kind of realignment as does Structural Integration, but goes about it quite differently. Instead of manipulating the body directly, practitioners attempt to "evoke" a new alignment and pattern of movement through the use of verbal imagery and light, guiding touches on their subjects' limbs. Thereby, they hope to retrain their subjects' "kinesthetic awareness," ultimately leading to new ways of using their bodies. Rolfing, on the other hand, seeks structural realignment through direct physical manipulation of bodily tissues.

6. *Bioenergetics* (developed by Alexander Lowen, John Pierakos, and other followers of Wilhelm Reich) involves a combination of body work and physical psychotherapy. Both are aimed at dissolving what Reich called the physical "character armor"—areas of chronic tension which prevent free flow of "orgone," or life energy, through the body. This is done verbally by attempting to resolve psychological bases of chronic "holding"; it is done physically by reenacting early, emotion-laden experiences (e.g., a temper tantrum) and by keeping the body in physically stressful positions which ultimately lead to fatigue, shaking, and the release of tension. Unfortunately, while realignment of the body is not an explicit goal of bioenergetics, the techniques (especially the stress positions) employed apparently do tend to produce an alignment incompatible with that which Rolfers seek to acheive. Accordingly, both Ida Rolf and Alexander Lowen have stated that it is necessary to choose between bioenergetics and Structural Integration in order to reap the benefits of either.

7. *Yoga* and other "eastern" physical disciplines were among those which Dr. Rolf investigated in the process of developing Structural Integration. Hatha yoga involves placing the body in various unusual positions ("asanas"), with the aim of both improving physical functioning and of enhancing mental and spiritual powers. If done properly, most of these asanas seem to be powerful tools for moving the body toward the kind of balanced alignment Rolfers seek.

(The main exception is the "lotus posture": since it is for meditation rather than for aiding the body, it seems not so well designed to enhance bodily functioning. When done regularly it tends to rotate the lower leg bones—the fibula is rotated on the tibia—and to move the sacrolumbar joint too far anterior. So if you want to meditate, lie flat on your back or sit in a chair with your body relaxed and your back straight.)

The catch, according to Dr. Rolf, is that few people know enough about how bodies work to do or to teach the asanas properly. When they are inappropriately done (for example, when students are not taught to extend their spines before they flex them, to bend forward from deep in the abdomen rather than by arching the back, etc.) the asanas may lead to greater flexibility not by balancing the body but by breaking it down.

Summary

Structural Integration attempts to enhance overall personal functioning by bringing the body into better balance through systematic manipulation of bodily tissues. It consists of a series of sessions (usually 10) over the course of which the practitioner works at first superficially and then deeper throughout the body. The person being rolfed participates by bringing his active attention to the area where the Rolfer is working, and by striving to use his body appropriately as he moves through the world thereafter.

Structural Integration arose out of Dr. Rolf's belief that most people, even if they aren't "sick", could be more fully, vibrantly alive, and her resulting study of ways of enhancing human functioning led her to the following assumptions:

1. Each body exists in a field of forces to which it responds in some way.
2. The body changes with amazing plasticity according to how it is used.
3. The whole body operates as a system: changes in one part lead to compensating changes throughout all parts.
4. Some changes make it harder for the body to deal with the forces acting on it.
5. The body functions best when it is in balance.

These assumptions, in turn, led Dr. Rolf to the following assumptions about therapy:

1. Force exerted toward an optimal (balanced) alignment, even if exerted only on the "surface" of the body, will ramify through the system and ultimately will evoke a better alignment of the *whole* body.
2. Work on the whole body is more effective than work on just one part, since local change is deeper and more enduring if it is preceeded by work on more distant compensations.

Research on the effects of Structural Integration has just begun. So far it indicates what seems to be significant changes in neural activity (toward a pattern in which "when the muscle works; it works; when it rests, it rests") and brain functioning (toward more spontaneous, open, reaction to the environment and the body's internal cues.) Subjective reports from people who have been rolfed include the fact that they stand straighter, that physical changes have taken place which they like (they have more energy, feel better about their bodies, etc.), that they feel more "open" and "aware," that favorable psychological changes have taken place, and that their lives in general have improved. Some also report having re-experienced and afterward having felt released from an early traumatic experience.

In conclusion, Structural Integration is compared briefly with medicine (as practiced by M.D.'s), osteopathy, chiropractic, naturopathy, massage, programs of exercise, the Alexander technique, bioenergetics, and yoga.