

POSTURAL RELEASE

AN EXPLORATION IN STRUCTURAL DYNAMICS

by Ida P. Rolf, PH.D.

Under the name of **Structural Dynamics**, and its implementing manipulative technique, **Postural Release**, a significant area in human experience is being explored. Subjectively speaking, it is a study in awareness. Objectively, its outline was delineated by Cuvier in 1821. His description, however, referred specifically to paleontology:

"Every organized being forms a whole, a unique and closed system, of which all parts mutually correspond and cooperate by reciprocal action for the same definite end. None of these parts can change without the others changing also; consequently each of them taken separately represents and postulates all the others." (Cuvier: *Recherches sur les Ossements Fossils*, 2nd Edition, Vol. 1, 1821)

Cuvier enunciated this "correlation principle" with reference to the bony, or hard, constituents of biological organizations. The hypothesis seems to be all-embracing, however; when expanded, it is found to apply quite as appropriately to the living human, functioning as a physical-chemical-physiological-psychological whole.

Within this framework **Structural Dynamics** may be defined as an objective study of such reciprocal action in the individual man; as an objective study within that very broad part of man's consciousness of himself which he has called by the abstraction "posture."

Any such study, however limited, shows that this overworked and misunderstood word "posture" designates a much wider and more significant area, both objective and subjective, than has been suspected heretofore. Until recently this word has been basically restricted to a consideration of body contours. As such it has referred only to a relatively confused region emerging, little by little, from the unknown.

The classical text in this field, *Body and Mature Behavior* by M. Feldenkrais, was first published in 1949. It is a comprehensive and inspiring pioneer work pointing out a new approach; namely, the extent of the interdependence between body posture and psychological expression. Posture, which has been considered an outward and visible relationship, may be examined extensionally as dynamic energy expressions rather than as static, spacial configurations. Energy mobilizations or energy expenditures emerge as a result, as well as an expression, of the shift in component parts of the body with reference to each other. Simultaneously, interplays occur between the body-as-energy-field and its environmental earth-as-energy-field. However, these are premises that have not been exhaustively explored as of 1960.

A start toward the examination of this premise of interchanging energies, with special reference to the work of Structural Dynamics, was made by R. B. Taylor in a challenging article entitled "Bioenergetics of Man" (1958 Yearbook, published by the Academy of Applied Osteopathy, p. 91.). To confirm this postulate precisely will be a long and arduous task. But any demonstration is significant which proves that a fundamental change in the mechanical or dynamic relation of the component physical parts is accompanied by a change in other energy indices of the organism.

That is, any basic and permanent alteration in posture must be reflected as a change in physiological functions (heart beat, respiration, blood pressure) and/or chemical constituents (chemistry of blood or urine).

The word "posture", in its physical sense, has been commonly accepted to mean a static alignment of body parts, one above the other, rather like stacked suitcases or boxes. This limitation was perhaps inherent in the derivation of the word from the Latin *positura*, position, which in turn derives from *ponere*, to place. *Positum est*, meaning "it has been placed," inevitably reflected into the English derivative "posture," giving the word an undertone of static completeness. But posture, in its wider sense, is the momentary, ever-changing balance of body components in space, as they relate to the force of gravity at any given instant and in any given position. A posture which can truly be called integrated or dynamic indicates

that the body weight is adjusting itself to the gravitational pull with the least effort. This can happen only if at all times the tendonous relationships within given individual joints are appropriate to their actual structure.

Any movement should be called appropriate only if it conforms to a pattern which is economical of energy. This requires that the articulating surfaces function in accordance with their anatomical structure. In the context of this article the words "integrated" or "coordinated" summarize a state having two characteristics: first, the muscles, etc. must be able to balance one another; second, the muscle antagonists must be capable of such rapid and suitable change in length as to make the adjustment seem instantaneous. This very rapid coordination in reference to lengths as well as directions gives rise to what is experienced as a balance in tensions.

Illustrations of departure from an efficient and appropriate functioning are not hard to find. Particularly glaring are the random patterns in the average use of feet. Frequently this malfunctioning may be laid at the door of educators. Many schools, as well as the armed services, insist that young people "toe out." In this fashion strain is introduced into the weight adjustment of the entire body. Besides this induced type, there is a spontaneous departure from appropriate usage. This happens when feet reflect the strain occurring through a rotation in the pelvis, but in this case one foot usually toes out to a much greater degree than the other. Mechanical common sense suggests that to progress in any given direction both feet should be parallel and should be directed straight forward toward the objective. It is not merely ordinary mechanics, however, that dictates such a progression as the most efficient. Examination of the articulating surfaces constituting the bony structure of the ankle joint bears witness that any eversion of the foot in forward translation can only increase the physical energy necessary to carry the body forward. When such an assymetric gait constitutes the habitual pattern, the muscles around the external malleolus thicken and degenerate. They are no longer capable of subtle adjustment and lengthening. Frequently they can be felt as a non-elastic gristle. Certainly they do not offer examples of rotation-about-a-joint appropriate to the articulations of that joint.

The understanding of the role of posture has been handicapped by a general failure to visualize what constitutes posture and an inability to perceive its non-static quality. Few workers in education or in therapeutics realize that the movement of the body-as-a-whole not only betrays but also interprets the problems of the joint structure. Nor do they appreciate that departure from appropriate structure is one of the more prolific sources of body stress. Appropriate body movement is such a rare grace that it is difficult to recognize. Functional movement adheres to structural design and meets fundamental physiological requirements namely, that extensor, or anti-gravity, body muscles are lengthening when flexor muscles are contracting. "Average" body movement, on the other hand, shows a shortening of all, or of a significant part, of the spinal anti-gravity muscles when the body is flexed. But it is only when anti-gravity muscles lengthen while flexors contract that true functional extension or, literally, lengthening of the spine occurs; such lengthening, in turn, permits spontaneous rehabilitation of vertebral discs, etc.

Only by this type of spinal extension can "chronic" and "recurrent" lesions be eliminated spontaneously. Such lesions are, of necessity, chronic and recurrent because of the inadequacies of the supporting, as well as the dependent, muscular structure. In such spinal extension the center of gravity of the body is raised and therefore a mechanical state is induced which gives rise to maximum potential energy. Feldenkrais, in a masterly chapter on "Erect Posture and Action," ("Body and Mature Behavior,") discusses the mechanical advantages to be gained by this type of shift.

Considerations such as these point up the existence of another glaring deficiency: namely, the present lack of data as to what constitutes a normal body. If we define as "normal" the body that is capable of this type of spinal lengthening, it is clear that the present records, the so-called "normal" standards for bodies, represent data for statistical norms, for "average" not "normal" bodies. This is true of physical standards, including the index offered by bodily contour, as well as for chemical standards such as blood analysis. One step toward lessening this confusion would consist in establishing standards for posturally normal bodies. Such criteria would derive

from many measurements: not merely the present gauge of visual contours at rest and in movement, but also the unseen data of blood chemistry and physiological function as it exists when the more normal pattern of contour-and-movement can be seen and verified.

The recent development of a technique called **Postural Release** has made it possible to effect profound changes in the mechanics of the body in a short time. Because of the speed of the method, a beginning can now be made toward a practical study of the chemical and physiological changes which accompany alterations in the spacial relationships commonly called posture. This methodology, largely manipulative, makes use of one of the basic principles recognized in **Structural Dynamics**: namely, that any permanent energy change in the body is necessarily the summation of increments of change on many levels. With respect to muscles, the word "level" is used in its literal sense. Consequently, a permanent removal of basic muscular restrictions (and all chronic malfunction is characterized by some degree of muscular restriction) can be accomplished only by a muscular release that is relatively complete on many levels.

A body which has lost, or perhaps never had, free movement is restricted not merely because of one impairment. Any given impediment, whatever its origin, can exist as an isolated problem for only a short time; then the body restores its original status, if possible. This solution can occur only if the body is, muscularly speaking, in a fairly good state of balance. A more probable sequence of events calls for spontaneously relieving the strain at the point of impairment by redistributing it. In this way the tension at the first point is lessened but another area begins to take on a greater load. Presently, a third area becomes involved in the same way to make the added burden of the second more tolerable, etc. This type of sequence is summarized by the word "compensation." Compensations, as they are embodied in the flesh, manifest as shortenings, thickenings, displacements and immobilizations of muscle fibers, muscles, their tendons, ligaments and fascial envelopes, in respect to each other. Seemingly there is no limit to the alterations to which the body subjects itself in response to its necessity to survive, as best it may, in spite of the original "accident."

Postural Release, the method referred to earlier, postulates that, to free these restrictions permanently, all the various components of the compensation must be released, one after another, starting with the more superficial. In this way the physical person is able to attain a new relationship to the gravitational force of the earth. Since a man relates himself to the earth through his feet, feet and ankle joints must be rehabilitated before a new and more subtle response to gravity can be effected. Again, only after the ankle joints function more appropriately, i.e., more like true horizontal hinges, is it possible for the body to meet the demands for free mobility of knees, hips, wrists, elbows and shoulders, as well as all spinal vertebral joints. In this way true functional movement for the body-as-a-whole can be established.

The phrase "true functional movement" is more than a rhetorical description. Extensionally, it records a state of least effort, of maximum efficiency with least energy waste in the process of movement; it means that the position of the component parts is such that the ensuing body movement looks deceptively simple. In other words, the movement is symmetrically constituted and may be analyzed in relation to three right-angled planes of reference.

Visually, such movement is characterized by the basic right-angled lines in the patterns generated by knees and elbows moving physiologically. The knees, in walking, progress by tracing horizontal lines at right angles to the fundamental vertical axis of the trunk. It is, of course, obvious that we refer here to a hypothetical "axis" which has no correspondence with the anatomical spine, but has been hypothesized as a line of reference for body movements.

For simplicity's sake, one can analyze these movements in terms of the right-angled x , y , z axes defining a three-dimensional space. If we identify the hypothetical vertical axis of the body with the x axis, knees will generate two parallel, horizontal lines in a y , z plane. At all points in this progression x is invariant, while y is defined by a constant, either plus or minus. In a similarly simple movement, elbows will follow one line in a horizontal plane. Again x is invariant, z equals zero, while in theory, the progression of the elbows will generate a y axis. In other words, in walking, knees (in a balanced body) follow two horizontal lines in two sagittal planes. In a similarly

simple arm movement. Elbows trace one horizontal line in one coronal plane. Visually these lines are straight, with no wavy rotational interruptions (These are applications of the ideas expounded by Jeannette Lee in *This Magic Body*, Viking 1946)

Such movement can occur in these joints, however, only when the muscular tensions of neighboring joints are also balanced. Therefore, not only must the elbow itself be free, but there must be a degree of symmetry about the wrist and shoulder before the elbow is able to generate a right-angled tracing. Similarly, the muscular status at both ankle and hip is revealed by the line the knee traces in walking.

This, however, is one of those over-simplified constructs which serve merely to furnish a practical approach to a real-world problem. Other than local neighboring areas often contribute to delinquent patterns. Tension in spinal muscles at any point of the trunk, aberrations in the rib structure, etc. can and do interfere in the movements made by arms and legs.

The more the functioning of knees and elbows is studied, the more apparent become the reciprocal relations existing between spine and extremities. Trunk muscles must attain a degree of symmetrical balance before the free movement of knee and elbow becomes available. But it is only through freeing the shoulder girdle that the muscles of the upper dorsal and cervical areas can be lengthened, thus allowing the neck to set back on the shoulders, as well as to lengthen. Alignment of the ear with the point of the shoulder, a standard index of good posture, then becomes possible.

The dorsal and cervical areas of the spine also seem to integrate at this point, as well as to straighten; at this time the entire spine apparently lengthens. This again raises the center of gravity contributing a more subtle balance and a more delicate mobility to the body-as-a-whole. The spine appears to regain that characteristic lengthening-under-all-motion which can be seen in the movement of well-coordinated young children.

These patterns of movement are the outward and visible signs, the

definition, of posture appropriately called dynamic. It should be noted that when a body is capable of this type of movement, the individual says he feels "light" or he feels "loose" or he feels "free." Actually, subjectively, he does feel light; to him his body seems to weigh less and in movement it looks as well as feels less earth-bound. A passerby, if he happens to knock into him, does not meet with a stone-wall type of resistance, but with a resistance which is mobile, a barrier which seems resilient and elastic.

However, as for feeling "loose" or "free," this is merely his subjective registration of what is objectively a *tightening* rather than a *loosening* of the muscles, in the sense that it is a *balancing* of muscles occurring within the area. Manual palpation reveals that it is the flaccid muscle that has taken on tone. In so doing it has relieved the necessity for hypertonicity and tension in its antagonist. The subject's verbalism "loose" records a muscular *balancing*, not a muscular loosening. It is *balance which is the essence of ease*.

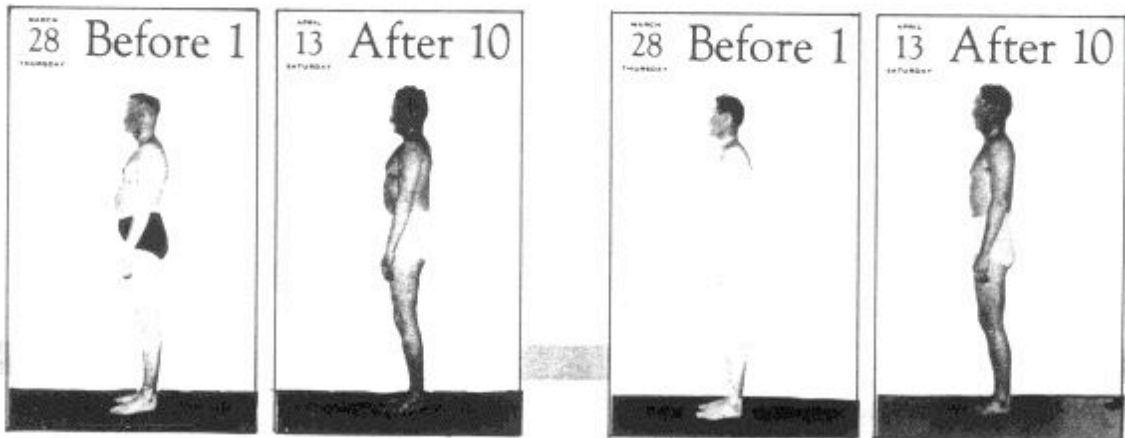
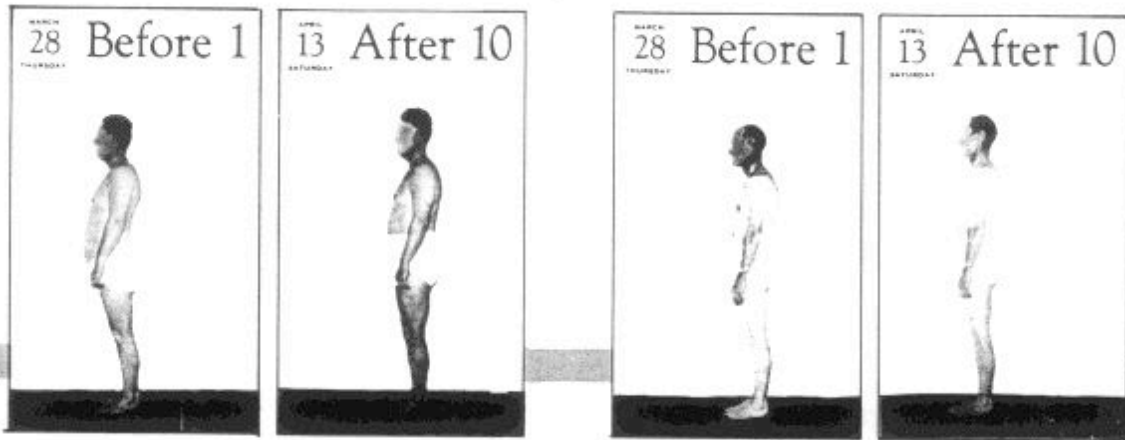
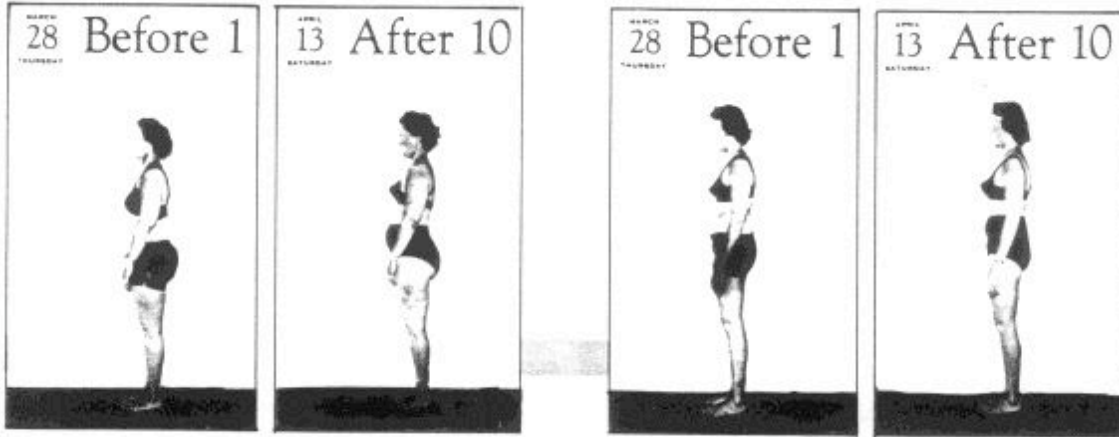
The tendency of the body to forward its own vital spontaneous rehabilitation is nowhere more evident than during the progression of a postural release. Standard procedure in this methodology calls for a series consisting of ten hours of manipulative organization. Actually, however, impressive contour changes are evident in the intervals between individual hours of processing, as well as in the more extensive changes seen as a result of the ten-hours sequence considered as a whole.

The standard series of ten work-hours may be given very rapidly, if necessary. It is not desirable to space these individual processings at intervals of less than forty-eight hours. In fact, in the average individual, it is preferable to permit these drastic body changes to occur over a period of four or five weeks. However, the photographs shown on the inside of the cover illustrate the changes occurring in members of two classes training as teachers of the technique. One of these classes covered a period of eighteen days, the other of sixteen days.

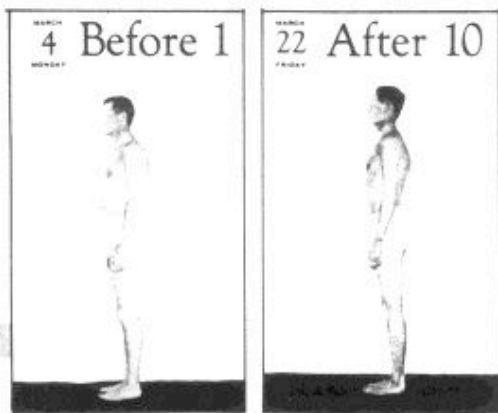
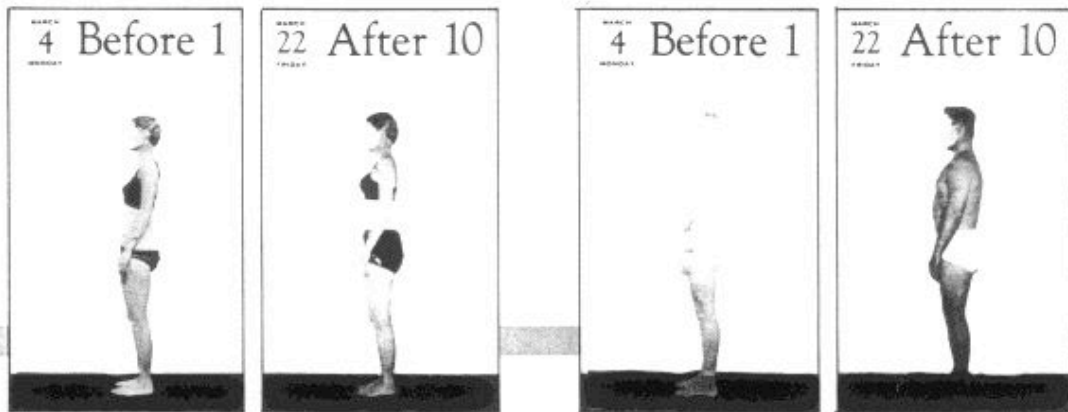
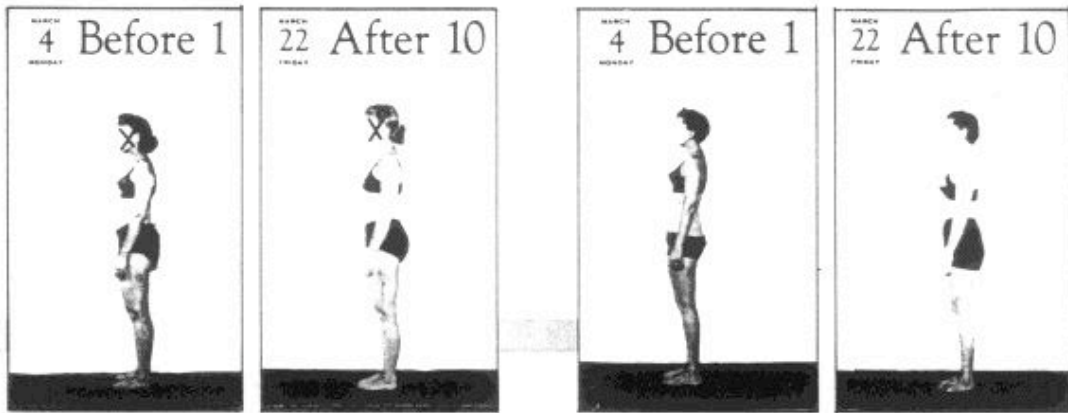
An outstanding conclusion emerges. Physical, chemical and physiological measurements made during postural studies in **Structural Dynamics** demonstrate that the body, in order to act effectively, must function as an integrated whole. This lesson takes on dramatic emphasis when, in following cardiac function, for example, one finds an irregular tachycardia settling to a strong rhythmic pulse only after pelvic restrictions are released through specific organization of the muscles attached to the pubes and the anterior iliac spine.

Much work remains to be done in the exploration, and particularly in the measurement and recording, of the areas in which this technique is outstandingly useful. The combined efforts of workers in many related fields, including the training of a large corps of skilled technicians in this particular manipulative area, are required to accomplish this. Nevertheless, a noteworthy conclusion is incontrovertible even at this point: one significant factor in human wellbeing is *spacial relationship*. This relationship may be that of component parts one to another or, most importantly, the integration of these into an organic whole.

Editors Note: Aforementioned original 'cover illustrations' appear on the following 2 pages



Class of 1957—March 28th to April 13th—16 days—total of 10 hours of work per student.



Ida P. Roy

Class of 1957—March 4th to March 23rd—19 days—total of 10 hours of work per student.