



Sensomotorische Körpertherapie
nach Dr. Pohl®

Helga Pohl:

Therapy against pain without drugs

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Summary: *This article is concerned with chronic pain experienced in the body's "movement apparatus". Following the portrayal of several typical conditions, the conventional medicinal explanations for their origins will be refuted. It is demonstrated that the true cause of chronic pain lies in the over tense, permanently contracted muscles. Since the contraction of the affected muscles is controlled by unconsciously operating parts of the brain, the tension cannot be released purely by conscious means. However, methods of body therapy are described here with which one can learn to prevent the unconscious tension of our muscles, leading to the complete relief of pain. This, in turn, has a positive effect on the psychological well-being.*

Almost all of us are plagued by pain, who isn't?

- We wake up in the morning with a stiff neck - or
- Our back hurts so badly that we can hardly bend down or stand up straight - or
- Hip pains make every step torture - or
- Even just shaking hands causes terrible pain in the elbow - or
- At night we are awakened by cramps in the calf - or

- In the morning we are so stiff that we can hardly move, let alone put on socks and shoes - or
- A shoulder hurts and is restricted in movement, so that for instance it is a big effort just to comb one's hair - or
- Hands keep getting stiffer and more insensitive - or
- Pain shoots like an electric wire from the buttocks to the foot etc. etc.

From a certain age there is hardly anyone among our population who at least temporarily has not been plagued by one such complaint or the other. For many people they have become a chronic burden in daily life, which often makes life a torment.

How orthopedists explain such pain conditions

Orthopedists tell us we are suffering from lumbago, damaged intervertebral discs, cervical, thoracic or lumbar spine syndrome, arthrosis, arthritis, rheumatism, scoliosis, tennis elbow, carpal tunnel syndrome, curvature of the spine, broken or inflamed joints, shortened tendons, sciatica, meniscus lesions etc., etc.

All these diagnoses are only circumscriptions respectively translations to Latin, which do not state the reason for the complaint. Lumbago for example means nothing other than pain in the sacrum. Only that „You have lumbago“ sounds more like a medical diagnosis than to tell a person „You have pain in the small of your back“ (which is why he came for treatment).

Most so-called diagnoses are simply descriptions of location. If the back of your neck hurts, that is called cervical spine syndrome; if it is in your upper back, it is called thoracic syndrome; in your lower back lumbar spine syndrome; in your lower arm tendinitis; in your elbow tennis elbow; around your sacrum „inflammation of the iliosacral joint“ etc., etc.

If we ask about the reason for all these problems, the answer is usually that it is a degenerate condition. If we are elderly, the cause of the degenerate condition is usually attributed to our age. We are told: „You have to live with it; you're not getting any younger.“

If we are assailed by such problems at a younger age, they tend to be attributed to anatomical abnormalities (for example a slanted pelvis or a too short leg). If they occur in children, they are called growing pains. Or even, regardless of age, the human being with his upright stance is branded as a misconception of nature, actually making back pains inevitable. If we are fortunate, the cause is attributed to weak muscles – fortunate because the prescribed therapy consists of movement. But all the causes mentioned are simply wrong. In particular, they are not caused by degeneration or age. The human being is not a machine!

If an automobile is left standing in a garage for ten years, it will sustain corrosion damage from standing still; but if it is driven a lot for ten years, it will develop much more damage from wearing out. One must replace the fan belt and exhaust pipe, etc. With the human being, it is the other way around: if one were to lock him into a small dungeon for ten years, in which he could not move, he would have many of the above mentioned complaints. However, if during the same time period, one lets him move a great deal and in diverse ways, he will be spared these problems. The human body does not wear out through movement and exercise; on the contrary, it needs exercise as vitally as food and air. The joints are greased, nourished, and cleansed of waste substances by exercise.

What then is the cause? It cannot be age alone, as age is neither poisonous nor a disease. There are many elderly people (especially in other cultures) who move with pleasure, without pain or limitations. Likewise, children's growth is painless.

Also, nature and the upright stance do not qualify as scapegoats, because back pain or similar ailments are practically unknown in indigenous peoples. Lastly, slanted pelvises, varied leg lengths, crooked spinal columns and similar conditions are only very rarely due to abnormal bone structure, but rather the result of incorrect muscle posture. This means, the leg is unintentionally pulled in, the pelvis is held slanted, and the spinal column is distorted by muscles.

A bone can only be moved to another place and held there by muscles. Also, in the spinal column this is not possible in any other way. No little green men are sitting on

the vertebrae and pushing them around. Only with muscle-caused malpositions can one really speak of a deviation, because then we are in contradiction to the upright stance and to the laws of gravity. This can lead to a shift in the position of the inner organs, to a restriction of breathing, and, last but not least, to pain. The muscle-caused deviations also include pes valgus, fallen arches, splay-feet, and flatfeet, which are very popular as diagnoses, as well as most knock-knees or bandy legs.

Most other anatomical „abnormalities“ that are evident in bones are generally negligible, as they are not the cause of pain. In these cases orthopedists take all kinds of measurements via x-rays, e.g. the angle of the upper leg bone relative to the hip joint. If this angle differs from an assumed standard the diagnosis will be e.g. coxa valga, which is considered a congenital „deviation“. But it is not comprehensible why the owner of this „abnormality“ could walk around with it without pain for 30, 40 or 60 years and only now feels pain. The same holds true for the perception that someone has one vertebra too many and also for hundreds of minor deviations shown by x-rays. These „abnormalities“ are entirely harmless variations of the basic human model, which are not worth examining. As we all have differently shaped noses, different eyes or mouths, so we also have differently formed bones. It is one of the fascinating things about nature, that it is possible to create the same model, in this case the human being, and yet to vary it many thousands of times so that no one individual is the same as another. Nature does not produce factory items. Therefore, there is no rigid standard to test normality. The standard is set by the medical profession. To attribute pain to these „abnormalities“ of bones makes just as little sense as to claim that someone's propensity to colds is due to their long, short, crooked, straight, broad or narrow nose and to start a big nose measuring exercise.

A particularly popular object for x-rays and measuring is the spinal column. It is even given great significance as a mythical entity, which magically can evoke the most amazing pains and problems in completely different parts of the body. But this is not at all true. The spinal column is not as sensitive as it is usually described. Many massage practitioners, for example, have learned not to work on the spinal column, as this would be too dangerous. What is true is that the spinal column contains the spinal cord (i.e. a part of our brain), and that nerves exit laterally from the vertebrae

spreading all over the body. But the whole construction is very robust. The model vertebrate would never have been so successful in evolution if it had been so fragile that small burdens or deviations led to unbearable pain.

It is true that in all the above mentioned cases the muscles cause pain, not because they are too flaccid, but because they are involuntarily contracted and cramped. A constantly hard muscle is very often considered a sign of strength or fitness. This is a grave mistake, because a healthy muscle is hard and contracted only when it is working. At rest every muscle, and be it ever so powerful, must be soft. If not, it will sooner or later cause problems. This also holds true, contrary to many false opinions, for the abdominal muscles. They too should be soft in daily life. A constantly hard abdominal musculature prevents normal diaphragmic breathing, which will lead to a lot of problems.

Even when a pain is felt deep in a joint (e.g. in a knee, shoulder or elbow), it is easily perceived by pressing on the muscle insertions at this joint, that the pain originates from these points (at every joint muscles are inserted, as they have the task of moving our bodies in the joints; they function as a system of levers). Also with a headache, one thinks one feels it inside the head, whereas in fact it stems from musculature in the back of the neck, the neck itself or the head. To test this one can press the muscles in question; they will generally hurt with pressure.

Illustration:

When we are worried, the muscles on the front side of the body involuntarily contract. That is the main cause of back, head, neck and arm pain (and of depressions).

To test the muscle tone, the hardness or softness of a muscle, it is sufficient to touch it. But unfortunately, nowadays hardly any doctors touch their patients anymore; they usually rather look at their x-rays, computer tomograms or other machine-made products. From these pictures one can see that, for example, vertebrae are displaced or are pressing on a disc; that articular space is too narrow; that cartilage is frayed or that bones are affected by arthrosis, which means that their surface has become

rough. However, the cause of all this discomfort cannot be seen on the pictures (cf. facing illustration)

Illustration:

a) Normal spinal column with loose back musculature and evenly distributed vertebrae (white) and intervertebral discs (black)

b) Illusion of a „damaged“ spinal column with dislocated, irregularly distributed vertebrae and intervertebral discs in x-ray image

c) Contracted back muscles, which cause malposition of the vertebrae and compression of the intervertebral discs

Chronically contracted muscles are the real cause

It is the muscles which are continually contracted so much that they squeeze the spinal column together or distort it, so that a disc can be squeezed out, which in the most unfavorable case can press on a nerve. It is the muscles which can squeeze the joints so badly that damage to the cartilage or even to the bone (arthrosis) and finally even inflammation (arthritis) can develop. The arthrosis itself cannot hurt, at least as long as only the cartilage of the joint is damaged (which is the case with by far the most arthroses), as the cartilage contains no free nerve ends and consequently no pain receptors. The alteration visible on the X ray is not the cause of the pain. Rather, the arthrosis as well as the pain are caused by the constantly contracted musculature. These continually contracted muscles can also directly clamp nerves so that nerve problems (pain, tingling, numbness) occur.

For example, a muscle in the buttocks (the musculus piriformis) can be continually contracted so tightly that it can press the sciatic nerve against the pelvic bone, leading to typical sciatic complaints. This cause is much more frequent than what orthopedists postulate as the jamming of a nerve root by an intervertebral disc in the lumbar spine. Altogether, most sciatic diagnoses are false diagnoses. Mostly it is just the musculature contraction in the buttocks and legs which hurts.

As it is almost only the muscles which directly or indirectly cause the pain, there is almost no connection between so-called „objective“ alterations – for example in the spinal column – and subjectively felt pain. This means that there are people whose spinal column looks „catastrophic“ on an X ray, but who do not have any problems. Others, however, are almost dying of pain, although there is no „objective“ finding. It is through superstition that we come to consider machine-made images more credible and more objective than what the person affected really feels inside (namely his pain) and what the examiner finds outside (namely the contracted muscle).

Only in very rare cases, in malignant bone processes, for example bone cancer, do the degenerative changes, which are visible on the X ray, actually hurt. In all other cases it is the muscles. Therefore, the cause of the pain is also not psychic, psychosomatic, or even just imagined, only because no change can be found on the X ray. It is simply that the wrong tissue was examined. If the muscles are examined, an objective finding can definitely be made. Most X ray examinations are completely superfluous. As back pain is also due to contracted muscles and not due to the spinal column or intervertebral discs, it cannot be removed by operations. This explains the disillusionment of many patients, who, even after successful operations, continue to be plagued by pain.

Like the bones, the intervertebral discs are also often wrongly accused as the cause of pain. This false diagnosis is so popular that even laymen nowadays often say that they have disc problems when they mean they have back pain. It is a fact that the muscles squeeze the vertebrae so that discs can be prolapsed or worn out. Most of these occurrences do not happen as an acute pain attack or a dramatic paralysis (if the prolapse is so unfavorable that it presses on a nerve) but proceed completely unnoticed.

In many spinal columns worn-out intervertebral discs can be seen without the affected persons feeling pain in these places. Here we are dealing with a pseudocorrelation: orthopedists have always only examined people who have pain. As they found many with damaged intervertebral discs, they concluded that these

were the cause of the pain. But, if persons without acute pain are also x-rayed, one also finds degeneration of the discs.

Prolapsed intervertebral discs can of course be operated, but they generally do not cause back pain, but rather, if they are situated unfortunately, nerve pain in the leg or arm. Often such operations are unnecessary, as by means of physical therapy the discs can move back to their normal place. Damaged discs do not cause back pain, but both are caused by continual contractions of the musculature. As the vertebrae are displaced by unequally contracted muscles, so-called reduction will help only briefly, if at all. Because, if the contraction of the muscles is not simultaneously corrected, the vertebrae will slip back to their old displacement.

Warmth applications, on the other hand, can very well alleviate pain, as muscles and connective tissue expand and relax under warmth. In the cold, however, they contract more, which worsens the pain (thence the reaction to weather changes). However, if inflammations have already occurred, cooling rather than warmth is indicated to ease pain.

An alternative explanation leads to alternative treatment

If the cause of all this pain and limitations in the locomotor system is due directly or indirectly to tense muscles, one will wonder how such continual contractions come about. One does not consciously keep the muscles constantly contracted.

Normally we are used to our skeletal musculature obeying our will. For example, we want to go to the post office and start moving our legs, or we intend to get something out of a cupboard and thus raise our arm. In all these voluntary movements we always have to contract at least one muscle (make it become harder and shorter) and at the same time relax at least one other muscle (make it become longer), the antagonist of the first one. For the opposite movement, for example to bring the arm down again, the circumstances are reversed. We exert this mechanism as a matter of course and without thinking about it. It is only when we feel pain or stiffness that we notice that it is no longer functioning properly.

However, if we are suddenly frightened or slip on a banana peel, very rapid movements take place, which are obviously not consciously willed and planned. Observing our movements in daily life, we discover that by far not all of them require our control: we involuntarily keep ourselves in balance and execute many movements automatically or semi-automatically (for example, when driving a car undisturbedly). For all these kinds of movements, it is not our somatosensory cortex (the part of the brain which controls our voluntary, consciously executed movements) which is responsible, but other deeper lying brain levels which usually escape our consciousness. Habits and reflexes are stored here in the unconscious – including those which are activated by feelings.

The border line between body and soul becomes blurred in the process. For example, if we become frightened, is this a mental or physical process? If we come home stressed from work in the evening, is it a physical or mental sensation? It cannot be separated, because it is both. When we are frightened, as well as when we are under stress, our unconscious brain regions cause muscles to contract involuntarily, and we have unpleasant feelings in one way or another.

If fright or stress happen again and again, continual contractions of the musculature develop and the necessary relaxation does not occur. Gradually, an unconscious pattern of contraction engraves itself in the brain. Outwardly this pattern is usually visible in the posture of the affected person. From fright, fear, feeling incapable, from everything that makes us retract into ourselves, a bowed posture develops. This means that especially the abdominal and thoracic muscles are chronically tensed.

Usually such a posture is taken as a sign of weakness or ‚letting oneself go‘. But this is not at all the case, as one can easily ascertain by touching the concerned muscles. The artificial „hold yourself straight!“ (which is generally used as an antidote) only has the effect that the tenseness in front is supplemented by a tenseness of the back muscles – thus the affected person is doubly tense. Help can only come from a loosening of the abdominal and thoracic musculature. Neither is ‚chest out – belly in‘ a good posture. On the contrary, this will lead us to cultivate lower back pain and respiratory problems.

Under stress or performance pressure, whenever we steel ourselves inwardly, stand firm, assert ourselves – we involuntarily contract the back musculature and the extensor muscles in the thighs. A swayback posture with locked knees results. So a swayback is also – like every other malposition – something that we (albeit unconsciously) do, not something that we have. Therefore, we can also learn to no longer do it, i.e. to no longer contract the muscles so much.

Accidents, one-sided injuries, operations and other traumatic events lead to involuntary protective postures. These make us incline to one side or become twisted, and correspondingly cause strain on certain joints. Like the two other protective postures, this is also retained as a continual contraction of the musculature – even when the initial cause, for example the broken leg, has long passed.

Finally, we can also acquire continually contracted musculature through „stupid habits“, general lack of exercise or work-related bad posture, which makes itself felt by pain. Many people sit at a computer with a crooked neck for several hours a day and are surprised when in the evening the back of their neck or even their whole back hurts. Here, too, one could find a cervical syndrome.

Illustration:

After accidents and operations permanently crooked postures often develop, the lateral and diagonal body muscles are contracted. That is the main cause of one-sided hip, knee and shoulder pain.

Moving and feeling is the motto

The tricky thing about all these malpositions, in whatever way they have developed, is that they develop imperceptibly and they feel absolutely „right“ and „straight“ for the bearer. The affected persons have no idea that they are holding part of their musculature chronically contracted. They only notice, sooner or later, that their back, knee, shoulder, the back of their neck, hip or something else hurts. The reason is, to quote Thomas Hanna, a „sensomotorial amnesia“ has developed. This means that

the conscious part of the brain no longer knows how certain muscles feel and can be moved.

Unconsciously continually contracted muscles are excluded from movement in daily life, which causes other muscles to be overburdened. This again is a source of pain. For example, instead of the shoulder girdle, only the arms are moved, or instead of the pelvis, only the legs. Finally, the whole torso musculature stiffens gradually, and only the limbs can be moved with difficulty. That is the condition which is generally called „old age“: immobility and pain. In fact, the older one gets, the more opportunity one has of acquiring such continual contractions; the more so if, following an internalised role model, one falls into immobility with increasing age.

Pain and immobility ultimately intensify one another. Often at the main contraction points so-called „myogeloses“ develop, hard spots at certain points in the musculature and connective tissue, which can be felt by the fingertips of practised hands. They are very painful under pressure and are themselves again a cause for the contraction of musculature. Microscopic analysis shows that metabolism waste products are often encapsulated here.

Myogeloses frequently develop in the aftermath of bruises, or if a muscle is insufficiently or not exercised at all for a longer time, e.g. in malpositions, or also if an arm or a leg has been in a cast for a lengthy period. Thus, the local blood circulation and the supply of nutrients as well as the removal of wastes are diminished. One can often feel cold places on the outside of the skin. In such cases a structural change of the muscle has occurred.

The good news: Something can be done against all these pains. They do not by any means have to be borne as blows of fate, consequences of old age or degenerative processes. One also need not operate or replace the problematic joints with artificial ones. But what treatment can be considered? As the reader of this journal you may first think of a change in diet. That can, in fact, help in some cases; for example, if calcium or uric acid deposits have formed. However, as many consumers of raw food have sorrowfully found out, unfortunately this often does not eliminate all the pain.

A malposition does not disappear through a change in diet. This has to be complemented by a change in movement. Even myogeloses and metabolic wastes often do not disappear through better nutrition alone. Frequently, hardenings and tissue clumps have formed to such an extent that one has to assist from the outside. Although normal massages are ineffective, through (painful) pressure massage one can release the hardened areas. Thereby, peripheral muscle contractions can be structurally eliminated.

On the other hand, the malpositions, in whatever way they have developed, are functional problems of central origin. They can best be released by purposeful movements, the development of body consciousness and re-learning good posture. It is not the goal, as in athletics, to move as fast or far as possible, but rather to move concentratedly, purposefully, and slowly precisely those muscles which one otherwise unconsciously keeps continually contracted.

For this „Hanna Somatics“ is especially suitable, a physical therapy which comes from the USA and unfortunately is not (yet) well known in the rest of the world. Hanna Somatics is a further development of the Feldenkrais method. Thomas Hanna, the founder of the method, bases his work on the following neurophysiological reflections: If a person's muscles are involuntarily tensed, he cannot consciously relax them. If I were to tell him: „These muscles are much too hard, loosen them up!“, he would only look at me questioningly: „Yes, but how?“

Illustration:

A swayback is something one does, not something one has. One unconsciously contracts the back and thigh musculature. That is the main cause of lower back and knee pain.

Also, conscious stretching of the unconsciously contracted muscle (which is often tried in traditional physiotherapy) makes little sense. Because there we are trying with our conscious locomotor system to counteract the unconsciously contracted posture: a fight, which we will always lose. However one can show the client the affected

muscle, make him feel it, explain the possibilities of moving it and have him first contract the muscle even more and then gradually, with the help of the therapist, lessen the contraction until it is ultimately relaxed. To this end in individual treatments mainly so-called „pandiculations“ are carried out, in which the client learns to feel what his muscle is doing when the therapist gives precisely measured counterpressure. He thereby learns to overcome the sensomotorial amnesia, to again control the muscle consciously – and thus to relax it. This relearning to consciously control one’s musculature is experienced as particularly relieving. In many cases a combination of both methods (Hanna Somatics and myogelosis massage) proves the most effective. Thereby the pain diminishes and the client feels overall better and becomes more flexible. As a tense muscle hampers itself and the connected muscles regarding blood and lymphatic circulation by clamping and narrowing the vessels, a deblockage simultaneously effects better blood and lymphatic circulation. The client feels that the treated area is warmer, wider, softer, and more alive.

With the two methods one goes through all the muscles which participate in the unconscious contraction pattern (and not only the ones where the pain is concentrated), in order to release the entire contraction pattern in the muscles and brain and construct a new movement pattern free from pain. Later, the client learns specific somatic exercises (pleasant to do), which one practices during and after the therapeutic period, and ultimately learns to also change the movements in daily life (e.g. to walk correctly, to breathe, to sit). One learns to feel again what one is doing.

Thereby, one permanently remains free from pain, flexible and in a state of well-being, as one altogether exercises more, because it is more pleasurable again. The whole procedure usually lasts only about 10 therapy hours which can be done at weekly intervals (of course individually differentiated). The active collaboration of the client is a basic prerequisite. And many do this very gladly, because it is very interesting to get to know one’s own body, much more interesting than to receive an injection.

Thus, completely without apparatus and drugs, pain can be healed at every age. Flexibility and joy of living are possible at every age.

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Further Information

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