

published in

Zeitschrift für Psychotraumatologie und Psychologische Medizin, ZPPM

2 / 2005, © Asanger-Verlag, Heidelberg

translated by Thea Tanneberger

Dialectical neuro-muscular Trauma Therapy

“The luring and the shocking are luring and shocking only for a being, which can prepare itself, which can approach and leave, shortly, which is able to move.” (Erwin Straus)

Summary

Experience shows that traumatic experiences are kept and take effect in neuromuscular pathways, which are not accessible to the explicit memory. From deep inside the body, invisible and covered, these patterns can effect all kinds of symptoms. Traumas – being understood as interrupted action – are constantly present and active in the manner of physical discomforts, (somato-) psychic symptoms and especially as interrupted, frozen neuro-muscular activity patterns, but still are inaccessible.

This paradoxical fact becomes understandable, if we assign the cognitive, emotional and motor/sensory representation of the traumatic situation-experience to the term of trauma concept, according to the dialectic change model. The dialectic change model after Gottfried Fischer is creating the inner process of Myoreflex Therapy.

For control of traumatic experience, the organism has developed a system of countermeasures, the trauma-compensatory concept: representations of traumatic experience are being isolated, sequestered. Although smouldering in the underground, they are not able to break free. The trauma-compensatory system forms, in the sense of sequestration, a protection area around the motoric wing of the trauma concept. On the physical, neuro-muscular level, this happens by fixation and pain avoiding postures.

By Myoreflex Therapy, these “control operations” can be therapeutically deconstructed. The compensation-mechanisms are overmodulated by myoreflex-therapeutic pressure point stimulation. Avoidance postures and fixations are therefore reflected and made conscious. Now working on the original trauma concept can be taken up again under improved conditions.

Keywords:

Basal ganglia, clinical anatomy, emotional anatomy, avoiding posture, motoric wing of psycho-trauma, psychomotoricity, trauma complementary therapy

Body-Scheme and Body-Self

The muscular system is the fundamental organ of our actions. By our body, we place ourselves in the world - our body gives us access to this world and enables us to examine it. Therefore, also facial expression and gestures are basic.

The phylogenic background of postures (f. e. to express fight- or flight behaviour), the articulation of interpersonal and social relations and the culture-specific meaning of movement are the contents of our motor system.

In the human being as a living centre of intersection of different integration levels, the body is at the same time sensitive and feeling.

„Bewusstsein ist Sein beim Ding durch das Mittel des Leibes“. *Consciousness is being with the things by the means of our body.* (Merleau-Ponty 1966)

Mittel ist dabei nicht instrumentell zu verstehen; es besagt nicht den Gebrauch eines Werkzeugs oder das Verfügen über ein Material. Mein Körper-Sein ist mein ursprüngliches Medium – „durch meinen Leib hindurch“ nehme ich wahr und handle ich. (Merleau-Ponty 1966) *Means thereby is not to be understood instrumentally; it does not mean the use of an instrument or to be in charge of a material. My body existence is my original medium – through my body I percept and act.*

„Im Vollzug wird unser Körper leibhafte Mitte unseres Verhaltens“ (Plessner 1961) *By carrying out, our body becomes the centre of our behaviour.*

So, the muscular system works in and for the human being. It takes over functions and contents, which by themselves, can not be taken from the body, but which are, without doubt, existent in the human body, that means, which are represented in and for an enclosing entirety.

Correspondingly enclosing concepts are necessary.

As our share of the environment, our body represents a special area of the environment – and it is at the same time the original location of our *self*. Interacting with the environment is closely related to the forming of the *body-self* and to the development of the body-consciousness. The surface sensation and the deep sensation (proprioception) are basic "dass der Körper sich in den sensorischen Antworten auf motorische Impulse 'zu eigen nimmt'" (Uexküll u.a. 1997) *for the body to percept itself in the sensory answers to motoric stimulus.*

Each performance by our body needs a *matching counter reaction of his physical environment.*

Feeling our environment and perception of one's self are basic and centring reference for the self-perception and the performances built up on it.

By a reafference-system enclosing all organ systems, our body is also constructed to be reflexive. This is the physical base of self consciousness. Our self mainly is a body-self.

If these processes and matches do not work out and if actions are traumatically interrupted, the "centre of our behaviour" becomes distorted. The "location of our self" becomes an "unsafe place". The distortion and obstruction of the reafference-system has to lead to fixations and symptomatic dead ends.

These facts are vital for the approach of Myoreflex Therapy. The proprioception and the "Rückmeldung der motorischen Impulse unseres Körpers ist Voraussetzung dafür, dass [und wie] der Körper sich als 'selbst' erlebt." (ebd.) *feed back of our body's motoric stimuli is a prerequisite for and how our body experiences itself as self.* Uexküll a.o. in this connection, talk about the subjective anatomy of the own body. This subjective anatomy and biopsychological dynamics can be taken up and touched therapeutically.

Myoreflex Therapy and Psycho-Dynamics

Myoreflex Therapy bases on anatomy in function with clinical treatment action relevance. Leading and expressive system in this concept is the muscular system. Each muscle can be compared to a force vector. The Interplay of several muscles designs the smooth motion geometry.

Muscle induced symmetric disorders and chronic miss-strain and overworking can lead to manifold symptoms. They lead directly to avoidance postures, states of pain, vegetative dysregulations and states of restlessness. Psychological injuries and trauma in the sense of interrupted, frozen action are countered by the muscular system (fight / flight) with hypertonia and freeze.

Myoreflex Therapy is mainly applied on muscle insertions in functional connection and kinetic chains. In these areas, touch stimuli are perceived more easily. A slight increase of pressure can already lead to a pain experience with radiation to areas far off. During palpation, there can often be found painful hardenings, myogelosis and swollen connective tissue. In the corresponding muscles, hypertonia can be observed. After exact palpation and pressure point stimulation of such areas, the perceptible modifications dissolve after a certain time (seconds to a few minutes). By a gradual increase of pressure onto the muscle-tendon-bone-intersection, neuro-muscular and connective tissue reactions are triggered.

The tension of the corresponding muscles spontaneously and clearly decreases by the therapeutic overmodulation and the introduction of negative feed back mechanisms.

By working peripheral on the muscle or joint through the neuro-muscular circuits, but central programs are touched and integrated, we can in a wide sense also talk about a new organization and reorganization of central circuits. (Mosetter a. Mosetter 2001; 2003)

The therapist's palpating finger offers help to the patient to feel and percept and shows (or reflects) the organism physical and neuro-muscular states in their variability by myoreflex-therapeutic steering of the motor-sensory attentiveness.

Especially in the region of the upper cervical spine, in the jaw muscle and masseter muscle, we find a receptor density with a thousand times higher innervation moment. Therefore these regions of perception and expression are particularly vulnerable. At the same time, endogenic regulations especially in these areas, lead to extensive de-stressing and relaxation over the whole spine with sympatholytic effects.

The physical and psychical dynamics are interwoven very close. Many seemingly only physical or motoric and orthodox psychological symptoms showed that the affected persons suffered or still suffer psychological or psycho-traumatic stress disorders. Correspondingly, the symptoms are to be understood in the sense of an overcoming strategy and trauma compensation.



Malfunctions of the self-system and also therapeutic alterations can not really be understood and tackled, without the integration of the psycho-dynamic, psychological and neuro-muscular, physical section.

Myoreflex Therapy tries to dissolve the endogenic basic tension, which leads to a relief of the neuro-muscular basic regulation. Conversion stimuli lead the organism again to a disturbance-free possibility of self-regulation. Base of any therapeutic work has to be stabilization, especially in the first phase of treatment, but also during each setting. Stabilization as therapeutic basic pattern means, that the patient's organism and his experience situation get more flexibility and free play – out of the bottleneck of automation.

Frozen motoric action patterns of the masseter and jaw muscles, of the muscle system of the cervical spine and of the muscle system of respiratory musculature and accessory respiratory musculature, the whole spine and the muscle system of the pelvis should be able to relax and dissolve during the first phase.

So, treatment of the segments C1, C2 and C3 lead to a decrease of the hypertonic, contract muscle-states of the cervical spine and therefore it leads to gain back flexibility concerning the head's rotation to the left, the right, back, upwards, downwards and to the front. So, the basics for a healthy, basal attentiveness- and orientation-behaviour can be gained back by a motoric release.

Fixed breathing patterns with contractions of the accessory respiratory musculature, the scalene muscles, the m. serratus and the diaphragm are released during treatment concerning the extension of the whole thorax and the breathing functions in general.

By changes of tension in pelvis, in the lumbar spine and mainly through the balance of the iliopsoas muscle and the gluteus muscle enable the patient to straighten up out of the spine again.

Modification of frozen tension patterns of the masseter and jaw muscles and the facial muscles, with neuro-anatomic directly anchored stress- and aggression-potential, are altered regarding both, self-expression and flexibility in perception processes. (Mosetter a. Mosetter 2001; 2003)

Basics of Therapeutical Work

1. In a non-verbal dialogue, the sensory system and the sensomotor system are aimed at with Myoreflex Therapy. The therapeutic hand, out of a meta level, can act as a tactile mirror of the concerned organism in this process. The body as reference area again learns to percept and to be perceived. With the motor-sensory reafference, dead ends and one way streets in the organism, in perception of the organism and in the described brain areas and their interplay can be newly regulated.
2. The encounter between therapist and patient has to take place on a meta-communicative level. If the patient feels the therapist taking him for a person opposite and communicates with him – not just as a primary technical, operative intervention and repair of disorders – then this mutual attention and acknowledgement can lead to a fruitful regulative figure in further therapeutic moderation.
3. The therapeutic regulations lead to a new stability in the physical self-perception: this new security in the reference system body supports the trauma compensatory scheme in a repairing step. So, the body changes from an “insecure place” into a “secure place”.
4. At the same time, the sensory and the motoric wing get closer together. So, the therapeutic modulation processes of construction and reconstruction can be initiated.
5. The treating finger serves the patient as help to feel and percept their body-self and to regulate their body scheme.
6. Treatment is manual with normally slight palpation pressure, without manipulation.
7. Especially in the area of the cervical spine and the masseter muscles, the patient in the myoreflex-therapeutic regulation circuit responds to stimulus patterns, which directly correspond with sympathetic regulations.
8. There, the exact individual localization, dosage, strength and time unit of stimulation are of vital significance.



The implicit Body Memory – featuring the Basal Ganglia

Our actions are supported and stored by the muscle system and the neuronal structures, which regulate it. These neuro-muscular reaction patterns are subject to the re-cognitive and reproductive assimilation's tendencies to repeat, which normally control, so Piaget, the scheme's sensory and motoric activity.

If these work unconsciously and without self-reference (fractionated), the self is not able to learn from the split off experience and its re-engineering in the trauma scheme. Similarity of the environment is substituted by equality. After Klein, Fischer and Riedesser talk about *passive repetition*.

The function and contents penetrating the muscle system are from this point of view not the result of a conversion or shift from psychological to physiological.

Different points of view show different facets. Often not the body is the primary disruptive element – but certain mental/psychological disorders and troubles originate from the body as an instrument of success for action. They are updated by the body's perception (by the *myo-reflex-therapeutic mirror*).

Situations and basic constellation become traumatic, when the efferent sphere and correspondingly the afferent sphere do not grip any longer. The situation circuit breaks up. In the sense of an active counter action ("Gegenhandlung", Fischer 1996b) and self-protection, the organism later has to blend out and uncouple both spheres. Along with that goes a splitting of the re-afferent supply of self-regulation. All these aspects of action lead an uncoupled independent existence, also on the neuronal level.

The sensory-motor reference stimuli, corresponding in their passive repetition with fight- and flight impulses or, in the worst case, the reflex or behaviour of feigning death and signalling a vital threat, are at the same time a product of this independent existence. This means, that this trauma state is kept up at first neuronal, secondly physical / neuro-muscular and thirdly (corresponding to this stress pattern), neuro-chemical/ neuro-endocrinologic.

In the sense of "switching" appropriate minimal singular reference, stimuli can be sufficient for emphasising and activating the whole traumatic action matrix and the corresponding assignment and usability of meaning.

„Die Basalganglien erhalten die bereits verarbeitete Information und wechseln die Verhaltensrichtung und die Reaktion („switching“), wenn konkurrierende Informationen eingehen.“ (Birbaumer u. Schmidt 1999)

The basal ganglia get information already processed and switch the direction of behaviour and the reaction (switching), when competing information comes in.

The basal ganglia thereby have to decide on the selection of emotionally controlled action patterns. To avoid inner threatening, the organism also falls back again upon the emergency strategy of long term strain or complete loss of tension.

The long term tension on the one hand serves the inner repetition in the sense of compensation; on the other hand it is supposed to grant further security. This strategy mainly gets stuck in the sensomotor system, because it provides further reafferences, as corresponding to trauma and its sensormotoricity of flight and fight.

The sensomotor patterns of flight and fight are mainly carried by the caudate nucleus. However, especially this structure should control states of overexcitability of the activating loops through the palladium, in a gating function to the special thalamic nuclei and from there it should synchronize with the neocortex, which means, it should be able to close overexcitement-gates. (Compare figure 1, output stations of the basal ganglia loop)



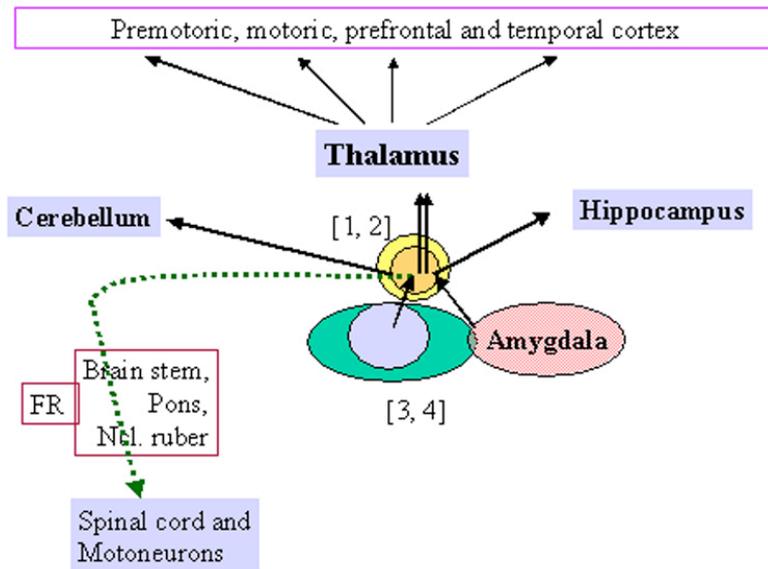


Figure 1, output stations of the basal ganglia loop

Explanation, simplified depiction of the structures of the basal ganglia: 1 – outer globus pallidus; 2 – inner globus pallidus; 3 – nucleus caudatus; 4 – putamen; 5 – embryological twin amygdala (taken from Mosetter u. Mosetter 2005) (explanations in text)

The structures of the basal ganglia not only play an important role concerning superficial movement (planning, carrying out and control of motion) and for development of movement programs, but also for emotional and cognitive processes, for attention behaviour and development and consideration of testing action.

The basal ganglia get their input from all motoric centres of the body periphery, from the muscle-, tendon- and tissue systems and from the totality of all sensory organs.

So, in the basal ganglia, the proprioceptive sense with posture, movement, joints, muscles and tendons is anchored in the body scheme and becomes indirectly therapeutically touchable. Also the cortex' complete state of excitement is communicated to the basal ganglia (See fig. 2, Input of the basal ganglia).

In the course of sensory-motor development and development of the body-self as well as in the course of experience and concept of action, the basal ganglia and the motor system have influence on processes of consciousness and attention.

Concerning motoric attention and the motor system of the orientation behaviour,

The basal ganglia are connected to different thalamic nuclei, the ventro-medial frontal cortex, the hippocampus, the baso-lateral amygdala, and the motoric fields of the islet and to nuclear zones of the mesencephalon.

Further, the nucleus caudatus is to be mentioned as a centre of motoricity of fear in its twin-quality with the amygdala and in its role for planning the motoricity of flight, fight and freezing as well as for anchoring of shamming-dead reflex. The basal ganglia decide on selection of emotionally controlled action patterns. (Birbaumer u. Schmidt 1999)

The basal ganglia get differentiated input from all regions of the central nervous system. The entrance stations for these signals are always in the striate body (nucleus caudatus and putamen). (See figure 2, input of the basal ganglia)

In an internal system of forward-loops in the nuclear zones of the basal ganglia, the output station differs completely from the input fields. We don't have conscious access to the in-between work processes. Also the consequences of output projections about closing corresponding gates to the thalamus can not be conscious.

Action planning of different cortex areas into thalamic nuclei, cerebelli and basal ganglia can be organized in "feasible" and "not feasible" and correspondingly switched. In this way, the course is determined and the switches fixed. So, in a traumatic body-state, arbitrarily and prefrontal cortex controlled action planning can not be lastingly set to work or put into practice.



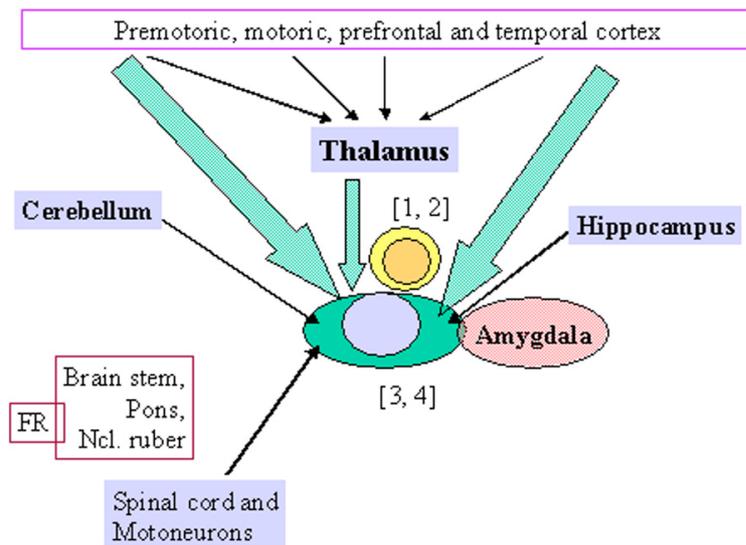


Figure 2, Input of the Basal Ganglia

Explanation, simplified depiction of the basal ganglia's structures: 1 – outer globus pallidus; 2 – inner globus pallidus; 3 – nucleus caudatus; 4 – putamen; 5 – embryological twin amygdala (from Mosetter u. Mosetter 2005) (explanations in text) The basal ganglia differ fundamentally from the thalamocortical system with its reciprocal reentrant network. (Bergmann u. a. 1998)

In the forward-loop-system, selective steps and decisions for certain movements and actions take place. These are consequently carried out in their sequence. If this sequence is initiated (similar to the decision to go skiing), none of the concerned movement sequences can be appropriately left (just as the skier, in his movement sequences can not change into those of a pole vaulter).

In this phase, the coordination of the decisive context-dependent movement sequences no longer allows access for the reentrant circuitry. For the basal ganglia do not re-project these processes into the cortex, these steps and facts stay unconscious to the selection of behaviour. (Birbaumer and Schmidt 1999)

Based on these decision rules, the basal ganglia are decisive for the understanding of traumatic experiences and traumatic processes.

The neurons of the basal ganglia are also plastic, so that compounds, once associated (for example an indication stimulus for flight and a certain body position from the cortex), can be triggered fast if there shows only one element of the stimulus situation. (Birbaumer and Schmidt 1999)

Also dysregulations, in which motoric and cognitive Routines and stereotypes are activated with excessive frequency, are anchored in the long loops of the basal ganglia in routine sequences. The same goes for experience and action patterns, which are felt by the experiencing person as being egodystonic. Examples therefore are neurotic behaviour and compulsory actions. (Compare to Edelmann u. Tononi 2002)

In their mechanisms of origin for the procedural, implicit memory, malleability and motoric learning are based in the basal ganglia. Then, motoric learning in traumatic process leads to stereotypes, an implicit freezing and to corresponding avoidance postures and –actions. During danger, fear and angst, the corpus striatum of the basal ganglia experiences changes in melody and flexibility of movement programmes through the black substance and the nucleus subthalamicus. (Zilles and Reikämper 1998)

Limitations in coordination and synchronization of motoric nuclei and resulting stereotypes can, on the other hand, obstruct centres of the cortex. Then, in network with the black substance, the striatum and the thalamus, a dysregulated dopamine synthesis in the neurotransmitter- and neuropeptide-orchestra may lead to further one-sided tension patterns and Parkinson-like symptoms.

Fixed body positions and activity patterns of flight-, fight- or freezing-behaviour trigger via circuits the whole trauma scenario and, at the same time, switch to a further polarization of trauma scheme and trauma-compensatory scheme.

So, the physical symptoms in the traumatic reaction and in traumatic process are not only to be understood in the sense of accompanying or epi-phenomenon. The physical initial position and the manner of orientation



and movement not only show to be decisive for planning a successful multidimensional and process-oriented therapy-strategy, due to the patient's personal experience, but also due to the neuro-anatomic total dynamics.

Parallelogram of powers

The treatment concept Myoreflex Therapy can be described through the model of dialectic changes after Fischer: in the trauma-situation, a perception- or action scheme gets activated, which stores the traumatic experience in the memory. In a traumatic process, following an emergency reaction, countermeasures are elaborated, aiming at control of traumatic experiences and at fending them off.

Starting point of the MPTT (Multidimensional Psychodynamic Trauma Therapy) is this trauma dynamic system, derived from the trauma scheme and the trauma compensatory scheme. The trauma scheme as interrupted perception- and action scheme (as interrupted fight-/flight-/freeze-reaction) forces, like any scheme, its way towards reproduction (in the sense of Piaget). This would be followed by a re-traumatization, if the trauma-compensating scheme would not continually and dynamically work against this reproduction. The minimally controlled action- or expression-field builds a compromise between the two force fields of trauma dynamics.

The dynamics of this system of balance can be illustrated as a parallelogram of powers. Inside, the diagonal stands for the resultant of the powers having an effect in the opposite direction and expresses the minimally controlled expression- and action-field. The resultant corresponds to the psycho-traumatic symptom as a compromise builder (MPTT). Also the concept of Myoreflex Therapy in the sense of a neuromuscular trauma therapy can be depicted in this way.

If we look at the temporal development of the symptoms (the diagonal) it can be assigned to the path of avoidance behaviour and to the wandering of the symptoms/pain. The muscular system proves to be the place and carrier of the psychodynamics of trauma. The avoidance posture functions as a defending movement in the traumatic process. It is to be understood as a fear-motivated unconscious-intentional counter-action.

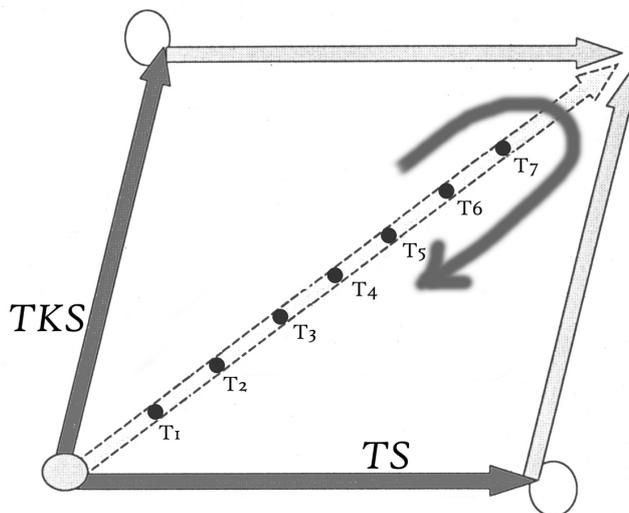


Figure 3, Parallelogram of biodynamic Powers

Symptoms and minimally controlled expression- and action-field correspond to the diagonal. Biodynamical and neuro-anatomical, they withdraw from an arbitrary control. But these dynamics can also be de-constructed on the same lawfulness. (Explanation in text)



These counter-actions are to be understood

1. as a control-action (avoidance posture) in the sense of a shutting off the traumatic, neuro-muscular perception- and action-scheme. Memories can be activated on different levels at the same time- so also in the body's sensory perception, body-tensions and action impulses (MPIT). Such neuro-muscular tensions can wander off to other body regions – and form symptoms there. (Mosetter u. Mosetter 2001)
2. as forms of expression in non-verbal communication (facial expression, gestures, postures of making oneself small, of defending oneself etc.) and of symbolic control.

Work Alliance and optimal Difference

For myoreflex-therapeutical treatment of psycho-traumatized people, the dialectical strategy of improvement and distinction of the trauma-compensatory scheme applies first. The aims of self-therapy, counter-action and self-defence are positively picked up. (MPIT)

Prerequisite for a constructive work alliance is that the therapist absolutely respects the strategies of trauma-compensation and does not tackle them too early. Applied on the myoreflex-therapeutic setting, this means, that the strategy of wandering-off is taken up and at first, so-called **far points** are treated. The therapist does not lay his finger directly on the wounded spot, but works far away from it. This way, he slowly traces the way back together with the client (T7 – T6 – T5 - ...), getting closer and closer to the point/area, in which the phase of trauma processing can begin (the phase of deconstruction, the construction-/reconstruction cycle).

In the sense of an optimal difference, the myoreflex-therapeutic stimuli and new neuro-muscular experiences (therapeutic inputs) are sufficiently similar to the old trauma scheme. Otherwise, they are insignificant. At the same time, they have to be sufficiently un-similar, so that the client is (1.) not overstrained and re-traumatized and, (2.) the old scheme can be worked over and be modified. (MPIT)

In the course of the neuro-muscular trauma-therapy, the paralysed balance of the trauma-dynamic starting situation loosens. Aspects of the so far fended off traumatic experiences, stored away in the trauma scheme, can then be permitted in measured doses, and be worked through step by step. (MPIT)

In the sense of an individual optimal difference, the personal rhythm of the client fixes the choice of therapeutic treatment points, and also their individual regulation.

Deconstruction, Construction and Reconstruction

By myoreflex-therapeutic help to feel and to percept, the patient can decentralize step by step and reflect his counter-actions on a neuro-muscular level. Denied forms of posture, having become independent, can become the contents of a new regulation-level. In the sense of a dialectical neutralization, the solution-strategies and perception-/action-schemes are deconstructed step by step.

This contains two moments:

- The reflexive, reconstructive turn-back towards one's own counter- and avoidance actions depicts an act of (happening on different and mostly painful integration levels) recognition/making conscious. The vertical control operations (specially no notice of noticing and working – meaning the splitting-off of the proprioceptive sense) and the neuro-muscular aspects of the passive repetition are overmodulated and so become accessible again to the regulatory attention. In the patient, memories of the traumatic event can become accessible for the psychological processing (in the sensory wing), as soon as a trauma-dynamical solution on the motoric level is found.
- This can only happen, when a new and higher reflection- and regulation-level is constructed, from which on (1.) this tracing back into the past is accomplished and the (2.) alternative possibilities of action and movement are available in future. So, for a successful and dialectic regulation, the protection from re-traumatizing is immanent. Importance and meaning of physical stabilization become clear in front of this background.

“In this constructive-reconstructive cycle a type of knowledge is acquired” which we call, with Fischer, “knowledge of change”. (KPuW)

The therapeutic dialogue level is the neuro-muscular, physical level, which can only be artificially separated from the psychological and mental dimensions of the human being. From this point of view, Myoreflex



Therapy or rather Neuro-muscular Trauma Therapy acts as a counterpart to a dialectical psychoanalysis and to psycho-traumatology.

The Diversity of Physically interwoven Symptoms, Example

The traumatic reaction on the traumatic level, does rarely affect only one organ system. It rather happens as an integral answer of the psycho-physical organism to the vital experience of discrepancy. Although, some typical repetitive reaction patterns and laws can be distinguished. So, for example, an answering system affecting the iliopsoas muscle (the course of thoracic vertebral body 12 via lumbo-vertebral transverse processes through osseous structure of the whole pelvis to the greater trochanter). The iliopsoas muscle normally controls the upright walk and stabilizes the cervical spine. To all situations of fear, flight or fight, this muscle reacts with a withdrawal reflex and an extreme increase of tension. This flexor- and tension-pattern can be fixated in a traumatic shock-situation or can be triggered again and again by cumulative traumatization and finally might be there on a long term.

From the muscle's contract units, different and also changing symptom pictures may result, such as unclear discomforts of the hypogastric region, bowel troubles, prolapsed disks, pain in pubic and inguinal region, as well as direct and radiating hip discomforts. With troubles in the thoracolumbar transition, irritations of the diaphragm and respiration can be observed.

The physical irritations on the one hand express the interrupted, primary fight- and flight-reaction (trauma scheme), on the other hand the avoidance behaviour, in the sense of the organism's trauma-compensatory tendency.

This opposed reaction pattern can, depending on anatomical and biographical features, manifest itself in different symptom pictures. If the memory of the traumatic situation is lost or fragmented, traumatic reaction or rather process represent the traumatic experience in the "implicit memory", on the level of the "physical/body memory".

Sensory and motoric wing of the trauma scheme are dissociated from each other, corresponding to the definition of trauma as "interrupted action". While, in the contract muscle system, the motoric wing is independent or metaphorically speaking "frozen", the sensory wing serves to save fragments of perception and memory.

The trauma-complementary therapy again unites both wings and can fundamentally start working from both spheres (sensory-motoric or motor-sensory). (KÖDOPS)



Literature

In brackets [] sources used in the text are indicated.

- Bergmann, H. u.a. Physiological Aspects of Information Processing in the Basal Ganglia. In: Trends in Neuroscience, 21, 1998.
- Bergsmann, Otto / Bergsmann, Roswitha. Chronische Belastungen: Unspezifische Basis klinischer Symptome. Wien 1998.
- Bering, Robert. Verlauf der Posttraumatischen Belastungsstörung: Grundlagenforschung, Prävention Behandlung. Habilitationsschrift 2004, in press.
- Birbaumer, N. / Schmidt, R.F.. Biologische Psychologie. Berlin, Heidelberg, New York 1996.
- Edelmann, G.M. / Tononi, G.. Gehirn und Geist: Wie aus Materie Bewusstsein entsteht. (A Universe of Consciousness: How Matter Becomes Imagination. Basic Books, New York 2000) Aus dem Englischen von Susanne Kuhlmann-Krieg. C.H. Beck, München 2002.
- Fischer, Gottfried. Dialektik der Veränderung in Psychoanalyse und Psychotherapie. Heidelberg 1996. [DdV]
- Fischer, Gottfried / Riedesser, Peter. Lehrbuch der Psychotraumatologie. München, Basel 1998. [Lehrbuch]
- Fischer, Gottfried. Konflikt, Paradox und Widerspruch: Für eine dialektische Psychoanalyse. Frankfurt a.M. 1998. [KPuW]
- Fischer, Gottfried. *KÖDOPS*: Kölner Dokumentations- und Planungssystem für dialektische Psychotherapie, Psychoanalyse und Traumabehandlung. (Deutsches Institut für Psychotraumatologie) Köln 2000. [KÖDOPS]
- Fischer, Gottfried. Mehrdimensionale psychodynamische Traumatherapie MPIT: Manual zur Behandlung psychotraumatischer Störungen. Heidelberg 2000. [MPTT]
- Graybiel, A.M. u.a. Multiple Output channels in the Basal Ganglia. In: Science 259, 1993.
- Graybiel, A.M. u.a. New Concepts about the organisation of Basal Ganglia Output. Advances in Neurology, 74, 1997.
- Illert, Michael. Motorische Systeme. In: R.F. Schmidt (Hrsg.). Neuro- und Sinnesphysiologie. Berlin, Heidelberg 1998.
- Kilk, Dorothea. Myoreflextherapie als Trauma Komplementär Therapie: Merkmale, Verlauf, Ergebnis und Wirkungsprofil. Dissertation, Köln 2005.
- Kühn, Wolfgang / Schink, Peter. Der Mensch als ein handelndes Wesen: Die Universaltheorie vom Handeln und die Frage-Methode. Regensburg 1999.
- Merleau-Ponty, M.. Phänomenologie der Wahrnehmung. (Phénoménologie de la Perception, Gallimard, Paris 1945) Aus dem Französischen übersetzt und eingeführt durch eine Vorrede von Rudolph Boehm. Walter de Gruyter, Berlin 1966.
- Mosetter, Kurt / Mosetter, Reiner. Myoreflextherapie: Muskelfunktion und Schmerz. Vesalius, Konstanz 2001.
- Mosetter, Kurt / Mosetter, Reiner. Kraft in der Dehnung: Ein Praxisbuch bei Stress, Dauerbelastung und Trauma. Walter, Düsseldorf, Zürich 2003.
- Mosetter, K. & Mosetter, R. (2005). Dialektische Neuromuskuläre Traumatherapie. *Zeitschrift für Psychotraumatologie und Psychologische Medizin* 2. S. 31-45.
- Mosetter, K. & Mosetter, R. (2006). Der Körper in seiner Umwelt – eine dialektische Einheit. *Zeitschrift für Psychotraumatologie und Psychologische Medizin* S. 59-71.
- Mosetter, Kurt / Mosetter, Reiner. Dynamik in Erleben, Körper und Gehirn: Momente einer Medizin des Menschseins. Vesalius, Konstanz 2005 (in press).
- Muth, Katharina (2006). Trauma und Schmerz. Evaluation einer multimodalen Therapie bei Patienten mit Posttraumatischer Belastungsstörung. Diplomarbeit. Universität Koblenz-Landau, Campus Landau. Lehrstuhl für Klinische Psychologie.
- Oeser, Erhard / Seitelberger, Franz. Gehirn, Bewußtsein und Erkenntnis. Darmstadt 1995.
- Plessner, Helmuth. Die Frage nach der *Conditio humana*. (1961) In: Ders. *Conditio humana*. Gesammelte Schriften VIII. Hrsg. v. Günther Dux, Odo Marquard u. Elisabeth Ströker. Suhrkamp, Frankfurt a.M. 2003.
- Straus, Erwin.. Vom Sinn der Sinne: Ein Beitrag zur Grundlegung der Psychologie. Springer, Berlin, Göttingen, Heidelberg (2. Aufl.) 1956.
- Strian, Friedrich. Schmerz: Ursachen, Symptome, Therapien. München 1996.
- Trepel, Martin. Neuroanatomie: Struktur und Funktion. Urban & Fischer, München, Stuttgart, Jena, Lübeck, Ulm (2. Aufl.) 1999.
- Uexküll, Thure von / Wesiack, Wolfgang. Theorie der Humanmedizin: Grundlagen ärztlichen Denkens und Handelns. München, Wien, Baltimore 1998.
- Wirsching, Michael. Psychosomatische Medizin: Konzepte, Krankheitsbilder, Therapien. München 1996.
- Zilles, Karl / Reikemper, Gerd. Funktionelle Neuroanatomie: Lehrbuch und Atlas. Springer. Berlin, Heidelberg, New York, (1993) 3. korrigierte Auflage 1998.



Myoreflex Therapy for Children with Attention Deficit Syndrome

Myoreflex Therapy offers a wide range of therapeutic attachment for infants, who offer at the same time very motivated cooperation.

Especially the attention deficit syndrome, but also describing terms like dyslexia or dyscalculia in their multiplicity should always be reconsidered as well, according to the perspective of functional and neuro-muscular laws. Etiology and genesis, but also prognosis and course are often interconnected with the „corner pillars“ geometry of movement and muscle system. Muscle induced miss-strain leads to postural anomalies, which, in a vicious circle, lead to asymmetries of the joint posture, fixing them. Myoreflex Therapy as a supporting therapy already offers enormous possibilities.

Background of many accessory results, but also central focus of manifold and komplex symptoms are very frequently symmetrical disorders of the spine and of the muscle system. Especially wrong position of the head joints, the mandibular joints and the iliosacral joints can be found in almost every examination. Deep muscular structures as that of the iliopsoas or the scalene muscles are mostly contract in this connection, other groups of muscles seem at the same time to be suspended and show a muscle weakness. As an immediate result derive functional cerebral as well as peripheric circulation disorders.

Muscle induced disorders of symmetry of the spine and chronic miss-strain can result in manifold symptoms. They lead to disorders in postural symmetry, postural asymmetry, conditions of pain- but they can also effect the vgetative system, causing sleep disorders, stomach disorders, general unrest and much more.

Through consequent treatment there first is the possibility of reorganisation processes of „defect“ regions in the brain, respectively brain regions which are switched off for reintrgration. Further it is possible that other brain regions take over the function of such a switched off area.

Apart from the multiple representation there are mainly new alternative interconnections which bridge the shortage.

In the multiplicity of the „learning processes“ itself and it's different approaches and their interconnections there are inexhaustible possibilities. Stimulation of the right half of the brain and construction of non verbal learning processes make possible a plurality of new approaches.

Muscle induced dysregulations in the area of head and head joints also lead to periorbital symptoms and to asymmetries and difficulties in synchronisation concerning the function of the eye muscles. Smallest irritations frequently lead to focus delays.

Considering this background makes it significant to examine children with attention deficit syndrome more closely.

For the therapist does not only work on the periphery of the muscle or joint through a neuromuscular feedback control system, but addresses and interconnects central programs, so that in a way it can be considered as an opening and new installation of an altervative network.

Through integration of organ science and acupuncture systems of the Traditional Chinese Medicine in context of the treatment, decisive influence is possible on vegetative accessory symptoms and on the immune status. Especially sleeping behaviour, hyperactivity, concentration and attention disorders, respiration function, appetite, digestion, spastic fit, anxiety attacks and crying fit regulate mostly quite impressive.

Particularly under the aspect, that working with children and disabled people requires a lot of intuition, the basics and settings shall be summarized as follows.

1. Treatment happens manually with normally week palpatory pressure without manipulation.
2. The playful cooperation of th child is the basic central pillar of the therapy.
3. The treating finger „serves“ the child as help to feel and perceive their body-self and to regulate their body scheme in the distinction of inner and outer world.
4. In a non-verbal dialogue the sensory and sensorimotor systems are the main aim of the Myoreflex Therapy.



5. Following the rhythm of the child, the family doesn't experience therapy stress, neither in the course nor respecting the frequency of the sessions.
6. The basics of early childhood development and sensorimotor system are in their significance also practical starting points of the treatment concepts.
7. All children will be respected in their wholeness and in their partly very high emotional intelligence, their attention will be eagerly sought and not estimated, but individually sponsored.
8. Classifications like normal or abnormal, sick or healthy patterns of development, of things, children should be able at a certain age to be able to or not to be allowed to, will be put in the background for the benefit of individual peculiarities and resources.
9. Unproductive conditioned role assignment in the family system and relating patterns of behaviour can be disconnected and regulated in their intricacy.
10. There are often hidden talents behind the attention disorder syndrome: complex perception on several levels at the same time, high artistic ability, the capability to see mental pictures deliberately three dimensional and walk around them in their imagination, a high creative potential and creativity. It should be a main task, to advance these talents.

Source: Mosetter, K. & Mosetter, R. (2005). Die neue ADHS-Therapie. Den Körper entstressen. Ein Übungsbuch. Düsseldorf, Zürich: Walter/Patmos.

