By Reinhard Eichelbeck

Curing Pain by Gentle Vibrations

The amazing successes of Matrix Rhythm Therapy

Problems with the musculoskeletal system are today the single biggest cause of sickness-related absences from work. One promising therapeutic alternative to pain killers and operations is a method utilizing vibrations with frequencies in the region of the brain's alpha waves. This method activates the body's own natural vibrations, thereby releasing muscle tensions on a fundamental level.

The human body has about 650 different muscles, more than 200 bones and over 100 joints. The complex interactions between these elements of the body are affected more and more by our inactive, sedentary lifestyle, by unbalanced, insufficient or excessive exertion. The result: one out of every three people in Germany suffers from illnesses of the musculoskeletal system. These conditions are the most frequent cause of sick leaves at work, causing 50 billion Euros of losses to the economy every year. The loss of quality of living cannot be expressed in numbers. What can we do about it? An extremely promising alternative to anti-pain drugs and operations is a therapeutic method which works with vibrations in the same overall frequency range as the alpha waves of the brain.

Patient Nicole D.* suffered for years from pains in the elbow region, a problem commonly known as the "Tennis Elbow". "Nothing helped", she said, "massages, taping, cortisone, physiotherapy – nothing – until I accidentally encountered Matrix Rhythm Therapy. After two treatments the tennis elbow problem was gone. For me this was a minor miracle."

Michael W.* had to undergo a knee operation following a sports accident. "Six days after my interior meniscus operation I was treated with Matrix Rhythm Therapy", he writes. "After eight more days I could walk normally."

Dr. Ulrich Randoll spent many years investigating the extracellular matrix, which is a key component of connective tissue. In order to eliminate blockages in this region he developed Matrix Rhythm Therapy.

The Importance of Connective Tissue

Matrix Rhythm Therapy – a special, penetrating form of vibration massage – can often help even in stubborn cases. The connective tissue and musculature are mobilized, and cells return to their normal state of vibration.

Inge G.* can also report positive results: "Before my treatment I had constant pain in the cervical spine area, which was aggravated by work at the computer. Matrix Rhythm Therapy was immediately successful, and the results were long-lasting."

These examples illustrate an essential aspect of Matrix Rhythm Therapy: Thanks to the vibrations generated by a special massaging device it has become possible to relieve painful shortenings, hardenings and cramps of the skeletal musculature and eliminate enduring symptoms.

"As soon as the connective tissue and musculature is remobilized, many problems simply disappear by themselves", explains Dr. Ulrich Randoll, who developed the treatment device in the 1990s at the University of Erlangen. After his graduation from secondary school he was first trained as a dental technician, after which he studied human medicine and dentistry. He did internships in various clinics in Germany and Switzerland and in 1989 became Assistant Physician at the Department of Oral and Maxillofacial Surgery at the University of Erlangen. Here he encountered cancer patients whose tumors in the mouth and throat region were so large that an operative removal provided no chance of survival. "For this reason", explains Randoll, "we no longer focused our attention on the immediate elimination of tumor cells, but instead attempted to influence their causes and growth via the extracellular matrix."

The "extracellular matrix" is today defined as the entire medium around and between the cells of the body. The extracellular matrix is the main component of connective tissue, which in turn makes up the largest part of our body. In former times it was regarded mainly as a supporting and filler material, and received little attention. In the meantime this view has changed fundamentally, not least of all thanks to the work of the Austrian physician Alfred Pischinger. He put forward the view that the basic regulation of the body occurs via the connective tissue. In honor of him the extracellular matrix is often called "Pischinger's space".

Today we know that connective tissue has a complex, highly organized structure with a large number of individual components, and can be regarded to a certain extent as the largest single organ in the body. It contains specialized cells, fibrocytes, which form a stabilizing network, as well as fibroplasts which form collagen fibers and synthesize glycosaminoglycans (for example hyaluronic acid and chondroitin sulfate). Besides stiff collagen fibers there are also elastic fibers in ductile tissues and reticular fibers that constitute the networks surrounding capillaries, muscle fibers and nerves.

In the interstices there is a whole armada of immune cells, macrophages, granulocytes and mast cells. In addition connective tissue is traversed by blood capillaries, nerves and lymph vessels. Above all this extracellular matrix is essential to the metabolism of the cells because its intercellular fluid contains nutrient substances, minerals and trace elements, oxygen as an energy carrier and hormones that control cell functions, including gene expression. This fluid also serves to dispose of waste substances via the blood and lymphatic system. Medications or nutritional supplements, which we take in, also arrive via this pathway to the cells where they are supposed to produce their effects.

Most of our body consists of connective tissue. Today we know that this highly complex system plays a decisive role for our health.

How Our Metabolism Works

The first single-celled organisms on our planet swam in the primordial ocean, also jokingly referred to as the "Primordial Soup", and fed themselves on substances contained in that "soup". The cells of our organism must do a similar thing because they are not directly connected to the blood and lymph vessels. Their entire nutrition and the removal of waste metabolites takes place via the fluid of the extracellular matrix, and this fluid must be in a state of constant flow in order for our system to operate correctly. The permeability and transport capacity of the matrix is crucially important to the health of our body's cells, and these properties depend very much on our lifestyle. Dr. Randoll explains: "When the transit routes are blocked, whether by excessively high viscosity due to insufficient fluid intake (older people drink less) or by excessively low flow velocity (older people are less physically active), then cell logistics break down. Symptoms arise as the end result of such process derailments."

The flow of the matrix fluid is maintained in two ways. Firstly, fluid flows out of the blood vessels and capillaries and is in turn sucked away by the lymphatic system. Secondly, an important role is played by contractions of the muscles. The skeletal musculature constitutes the second largest interconnected system in our body after the connective tissue, and can be regarded in many ways as a single organ. Contractions of the skeletal musculature lead to the production of messenger substances, the so-called myokines, which have a positive effect on the organism. Among other things they stimulate the movement of body fluids, thereby promoting the metabolism (see also BIO 5/2013, "Why Exercise is a Medicine").

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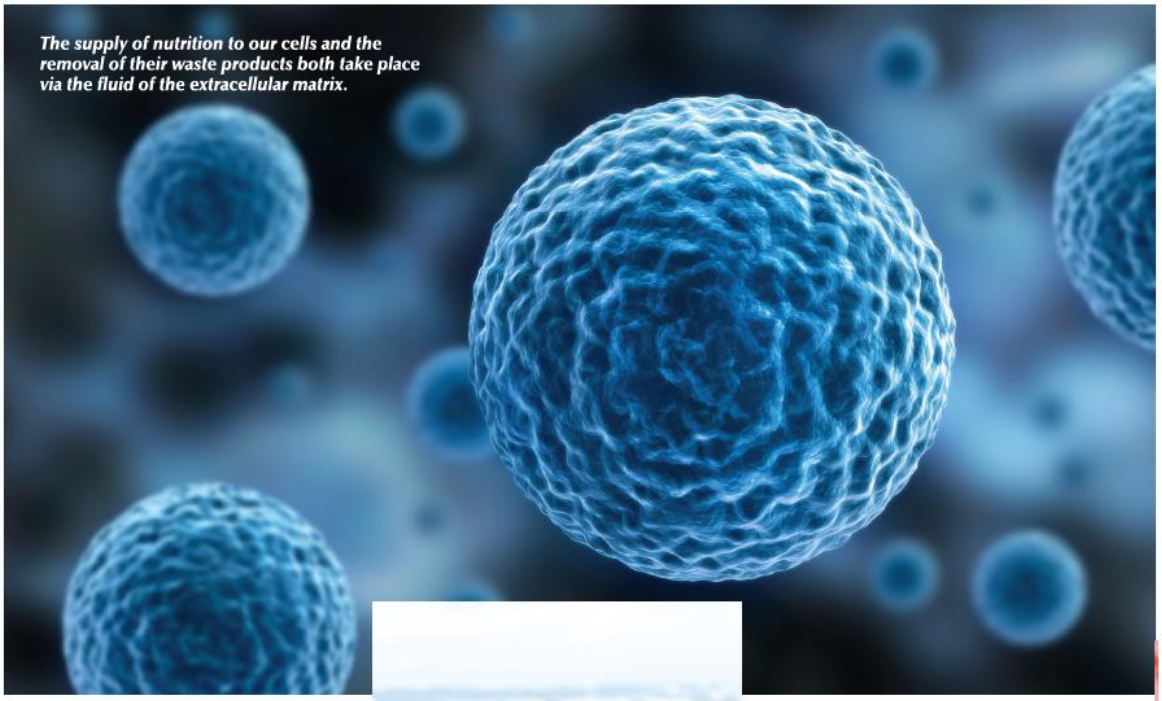
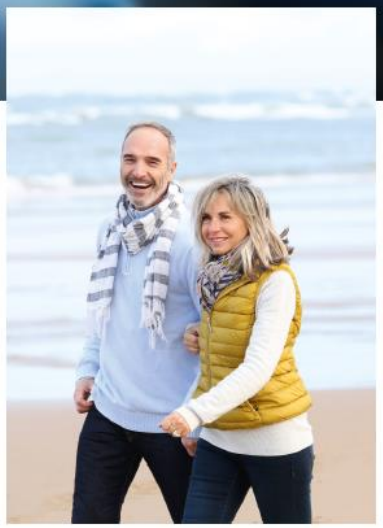


The supply of nutrition to our cells and the removal of their waste products both take place via the fluid of the extracellular matrix.

Fascinating: the Microvibrations of Our Skeletal Musculature

Already back in 1943 the Austrian psychologist Prof. Dr. Hubert Rohracher discovered that our musculature constantly vibrates in a rhythmic manner. This rhythmic vibration continues throughout our lives, while we are awake and while we are sleeping, from birth until 70 minutes after we die. These microvibrations, which we can neither see nor feel, occur in the frequency range between 7 and 13 Hz (vibrations per second), with the main part (about 80%) concentrated in the range 8-12 Hz. It is interesting to note that the latter frequency range coincides with the frequency band of the alpha waves which our brain generates when we are in a relaxed, meditative state. This frequency range also lies between two important astronomical frequencies: the so-called Schumann resonance, which is the frequency of a standing wave propagating between the surface of the Earth and the ionosphere; and the "first fundamental frequency of the Earth", which the physicist Nicola Tesla determined to lie between 11.75 and 11.79 Hz.



The intensity of the microvibrations of our musculature varies over a wide range. It is larger when our body is moving. There is already a big difference between sitting and standing, and the intensity is greatly increased when we engage in physically demanding work or in sports training. Interestingly, even thinking about exercising (for example thinking about playing handball or jumping) has a strengthening effect. The same goes for psychological tension or excitation, or startling events such as a sudden noise. On the other hand the intensity of the muscular microvibrations is considerably reduced by sedative drugs, muscle relaxants, procaine and nicotine.

Exercise and ample amounts of liquids are important for the healthy functioning of our cells – especially with increasing age.

The microvibrations are generated by tiny contractions of the skeletal musculature. The structure of these muscles can be compared with the rigging of sailing ship. Here many fibers are wound together into a thread, many threads into a yarn, many yarns into a strand and many strands into a rope. Taking this series in the opposite order: a muscle consists of many fascicles, each of which consists of numerous muscle fibers formed from myofibrils, which in turn are made up from huge numbers of myofilaments. The contraction of a muscle is produced by a slid-

ing action "rowing mechanism", of parallel actin and myosin filaments along each other, leading to a shortening of the muscle fibers. The process of releasing single myosin heads from actin requires energy after each "myosin-head power stroke". It is produced by the conversion of the substance ATP into ADP +Pi. The molecular level shows, that the relaxation of the muscle is not a passive process, but an active process in which energy is consumed. When the energy supply, dependent from microcirculation is completely interrupted, for example when a person dies, the filaments can no longer move back. The result is what we call rigor mortis – a total hardening of the muscles.

But even when there is a small energy deficit it can happen that individual muscle strands remain in the contracted state. When these "residual remanences" add up in the course of time, this can lead to strains and hardening of the muscles. Pain can result when strained fascias – the connective tissue surrounding the muscles – pinches the nerves (myofascial pain). It can also happen that disturbances in the blood circulation and insufficient supply of oxygen to the muscles lead to the formation of lactate, causing localized acidosis and leading to an irritation of the pain receptors (myoacidotic pain). In addition inflammatory swelling can arise as a result of muscle strain together with the permanently increased tension on the attachment points of the tendons (myotendinitis).

All these processes further reduce the permeability of the extracellular matrix and the energy supply to the muscle cells, thereby also reducing the capability for muscle relaxation. The hardening becomes worse and worse. A vicious circle is created. How can we interrupt this vicious circle and reverse the negative effects? That was the central problem which Dr. Randoll asked himself, back then, in Erlangen. His experience with cancer therapy showed him the way.

Strained fasciae – the connective tissue sheaths in our muscles – can pinch the nerves and cause pains.

How to Break Out of the Vicious Circle

"In cancer cases where classical therapy models failed, we were able to produce positive changes only through improving the overall environment of the cells", Dr. Randoll reports, "among other things only by means of good nutrition, increasing the degree of oxygen saturation and systematically improving the elasticity of the tissue."

In 1991 Dr. Randoll received a research grant to carry out "Clinically Linked Basic Research in the Field of Pain and Tumor Therapy". This gave him the possibility to concentrate on developing his ideas and testing them in clinical practice.

Since the earliest times Man has used various massage techniques to treat strained muscles and muscle pain. One of the oldest works in Chinese medicine, Huangdi Neijing, which is thought to go back to around 2600 BC, contains the first written accounts of hand massage treatments and gymnastic exercises. In ancient Greece Hippocrates used massage methods. They played an important role in the rehabilitation of Roman gladiators. Knowledge about them was lost in the Middle Ages, and was first reintroduced into medicine by Paracelsus in the 16th century. Samuel Hahnemann used them later as a supplement to his treatments based on homeopathic medicines. A special form of massage treatment is vibrational massage, where the hands are applied to make tissue vibrate. One of the pioneers of osteopathy, William Garner Sutherland, described this in his textbook "Teaching in the Science of Osteopathy" as a method for lymph mobilization.

Matrix Rhythm Therapy is a vibration therapy aimed specifically at the musculoskeletal system.

"Seen from an historical point of view Matrix Rhythm Therapy is a vibration therapy deliberately focused on the skeletal musculature", Dr. Randoll explains. "It can very broadly be understood as a further development of classical vibration massage. Vibration massages are effective treatments in the area of rehabilitation and sports. They are naturally very strenuous for the therapist and are limited by their poor ability to influence deeper-lying tissue."

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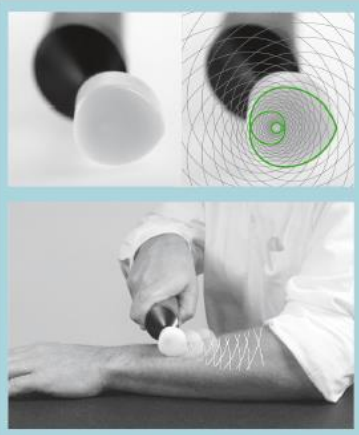
Penetrating Vibratory Massage – a Far-Reaching Discovery

In order to discover a treatment which can reach deeper layers of tissue, Dr. Randoll developed a special massaging device, the so-called "Matrixmobile". This is a type of massage stick with a vibration head which moves back and forth with a frequency between 8 and 12 Hz – a frequency that corresponds to that of the microvibrations of muscle tissue. Cells which have fallen out of the proper rhythm are restored to their natural state of vibration. The vibration head has the form of a logarithmic spiral. This form is based on the Golden Section and is often expressed in the morphology of plants and animals. The seeds of the sunflower are arranged on its branches according to the logarithmic spiral, as are also the eyes on the tail of a peacock. This structure can also be found in the shells of snails and clams. Dr.Randoll's design for the Matrixmobil vibration head was inspired by these natural forms.

The logarithmic spiral form can frequently be found in Nature, as for example in the eyes on the feathers of a peacock.

When the vibration head is applied to the body it generates a harmonic wave pattern which propagates in circular waves throughout the body. When the vibration head is moved its special shape generates an asymmetrical pressure distribution, inducing a pump/suction effect in the tissue and setting the matrix fluid into motion. The therapeutic effects are supported by the action of a magnet located in the vibration head. Experience and a series of scientific studies have shown that magnetic fields promote blood circulation and can alleviate pain (see also the article on "Magnetic Field Therapy" in the magazine BIO, 1/2008). The combined mechanical and magnetic vibration mobilizes the connective tissue, and muscular tension is released. The exchange of nutrients and metabolites is also strengthened, as well as the transport of oxygen in the tissue. The cells revert to their healthy natural vibration.



The vibration head is modeled on the logarithmic spiral. When it is applied to the body it generates a harmonic wave pattern that propagates in concentric waves into the body.

Matrix Rhythm Therapy – Successfully Utilized by Many Therapists

By 1998 Dr. Randoll had developed his device to the stage of practical application, and since then has trained more than 3000 therapists (physicians, dentists, physiotherapists, practitioners of alternative medicine, medical masseurs etc.) in its use. Each applies Matrix Rhythm Therapy to their own area of specialization. So, for example, the physiotherapist and sports scientist Meike Haas noted: „I work a great deal with the Matrixmobil, and the testimony of my patients as well as the body scanner images speak for themselves. For us Matrix Rhythm Therapy is a significant supplement to our array of therapies, and fills a gap in which we formerly could not really help our patients."

The dentist Dr. Thomas Weidenbeck reports about his experience: "In recent years Matrix Rhythm Therapy has established itself as a method for treating patients with chronic pain. I use it more and more also in the areas of prosthetics, end-

The Matrix Mobile can promote healing even in cases of diabetic foot.

odontics, functional analysis and functional therapy, orthodontics and surgery."

Dr. Randoll adds: "Matrix Rhythm Therapy has proven itself in all cases where the symptoms are caused by disturbances in the microcirculation. That includes above all the areas of perioperative care in trauma surgery, in rehabilitation, in pain therapy as well as chronic diseases of the nervous system and musculoskeletal system."

Further Important Indications

Indications include for example pain in the limbs, especially in the shoulder, hips and knee; head and neck pain; back pain; disorders of the tendons; muscular tension and hardening; muscle atrophy; oedemas, scars and disorders of wound healing.

Good results have also been obtained in the treatment of conditions arising from diabetes. For example a patient who suffered for 30 years from type 2 diabetes, developed a diabetic foot syndrome (DFS). An open wound on his big toe would not heal, and amputation was becoming the only option. After three treatments with the Matrixmobil the wound had healed and the patient could walk again without pain.

The well-known Japanese water researcher Dr. Masaru Emoto had a similar experience. He was once one of Dr. Randoll's patients. Every time he stayed in Germany he went to Dr. Randoll to be treated. In his case diabetes hampered the blood circulation in his legs; already after walking a short distance his legs began to hurt. "In 2008 I had three treatments by Dr. Randoll," he wrote at the time. "Since then my condition has improved dramatically and it was possible to cancel a partial amputation that had originally been planned."

In a study carried out in 2006 as part of a thesis, Daimler Chrysler company employees with various pain conditions were treated with the Matrixmobil. In 80% of the test cases the treatment led immediately to a significant improvement or even to the disappearance of the symptoms. Two months later the figure was still 75%. A similar study at Faber-Castell demonstrated an estimated savings of 40% in medical costs.

Professional athletes such as the tennis ace Roger Federer have discovered the benefits of Matrix Rhythm Therapy.

Top Sportsmen Also Benefit From Matrix Rhythm Therapy

Matrix Rhythm Therapy proved to be useful also in sports – not only in cases of injuries or other acute conditions, but also for prevention and training. Many leading sports figures have long since discovered the benefits of this therapy. These include for example Grand Slam ace Roger Federer, Luge World Champion Silk Kraushaar-Pielach, Bobsled World Champion und Playboy model Susi Erdmann, and the Austrian Snowboard Champion Brigitte Köck. The champion cyclist Stefan Mittelhammer wrote: "For a while I had big muscle problems at competitions (knee pain, muscle cramps, strained muscles etc.). Already after the first treatment I was enthusiastic about the result. After five treatments I had no more hardened muscles; I and my muscles felt relaxed and loose. Now, even after a hard training session a single Matrix treatment is enough to start the next day completely afresh. Thanks to Matrix I expect to compete successfully again in the coming season."

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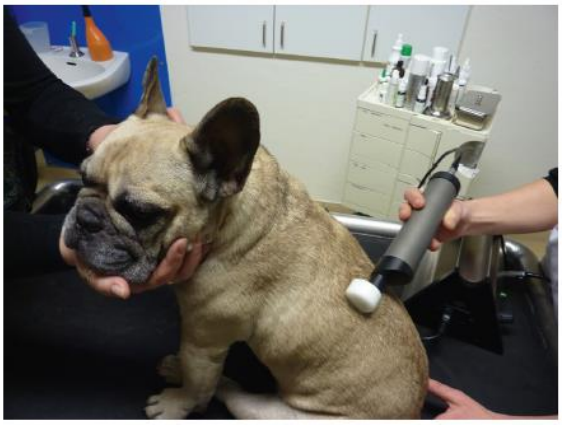
In the area of equestrian sports, horses have been successfully treated even where all other methods failed.



Thanks to Matrix Rhythm Therapy, the French bulldog Bruno could once more take long walks with his mistress.

Important: Active Participation by the Patient in the Healing Process

Since its beginnings more than 16 years ago Matrix Rhythm Therapy has gained more and more supporters, not only in Germany, but in 27 other countries. At the moment Dr. Randoll is active in India, where he is the integrating Matrix Rhythm Therapy into the framework of Ayurvedic medicine. There some enthusiasts are already speaking of "Turbo Pancha Karma". An undisputed advantage of Matrix Rhythm Therapy lies in the fact that it can readily be combined with other therapies. In his medical practice, for example, Dr. Randoll applies infrared heat treatment, oxygen therapy (HBO) and dietary consultation as supplemental treatments. He regards it as very important to motivate his patients to participate actively in the healing process.

"Above all the therapist's task is to create favorable conditions for the body's cells", he says. "The patient is responsible for maintaining the beneficial effects of the therapy over the longer term and insuring prevention by changing his or her patterns of behavior in the areas of nutrition, exercise and relaxation." Through our lifestyle we can do much, in fact, to support a well-functioning, permeable and mobile connective tissue, which supplies our cells in an optimal way. For this we need to insure an adequate supply of fluids, plus an alkaline-oriented diet with a large amount of plant nutrients, and either just a small amount of meat, or none at all. Important is a lot of physical exercise – without overdoing it – and frequent visits to the sauna or thermal bath. In addition stress management through meditation, relaxation and enjoyment of life. Relax, let go and open up to life.

"Life is rhythm, everything flows, or at least that is the way it should be. When anything is harmed, it contracts. Contractures come when the system suffers, cramps come when the system suffers, heart attacks come when the system suffers, and the end result is rigor mortis. All this shows that the difficult thing is relaxing, and not straining. The art of living consists in staying loose and relaxed. ■

Recommended Reading:

- Ulrich G. Randoll: "The Matrix Concept – Fundamentals of Matrix Rhythm Therapy", Verlag Systemische Medizin, ISBN: 978-3-86491-041-5
- Erich Wühr: „Systemische Medizin" (German) Verlag Systemische Medizin, ISBN: 978-3-86401-000-2

Internet:

- www.marhythe-systems.de (provides information on therapists and seminars)
- https://youtu.be/vRWAYAvaNOI (a video about Dr. Randoll's Matrix Therapy concept).

HOW MATRIX RHYTHM THERAPY CAN BE USED IN DAILY LIFE

In case of chronic conditions or injuries you should seek professional medical help. However you can utilize Matrix Rhythm Therapy for yourself and your family members for relief from everyday aches and pains. First of all a whole-day seminar to get acquainted with the basic principles of the therapy and how to apply it in practice is needed.

Beneficial Also in Cases of Physical Handicaps

A particularly interesting aspect is also the treatment of physical disabilities by Matrix Rhythm Therapy. Lukas, a Swiss youth, has been severely crippled since his birth. The technical description: multiple disabilities, cerebral palsy with tetra-spasticism. His mother spent a long time looking without success for a therapy that could help her son, until she discovered Matrix Rhythm Therapy. She wrote the following for the Delphin Network, which publishes a guide for disabled children: "This treatment is fantastic, I am totally excited". A friend of Lukas' mother had organized a benefit concert devoted to raising money to purchase a Matrixmobil so that she could treat her son at home. "I have to say that his life has changed" she writes, "he still has problems with spasticity – one cannot cure everything. But his hands are much more relaxed. His abductor muscles are much looser. The treatment relaxes him." In addition his sleep disturbances have lessened.

Penetrating vibration massage has achieved good results even with handicapped persons.

This experience is not new for Dr. Randoll. "This therapy is a blessing for the parents of spastic children. They report again and again that their children's digestion works again and the children can once again sleep."

Dr. Christoph Garner is the Director of the Bad Griesbach Clinic, specializing in the treatment of patients with severe cerebral dysfunctions, for example after strokes, in cases of multiple sclerosis and children with brain damage in early childhood. In this context he has utilized Matrix Rhythm Therapy for over 15 years. "In this way we achieve an in-depth relaxation of the musculature, which can be maintained over a long period by periodic treatments", he reports. "Besides spasticity this method is very effective also for contractures (limitations in the motion and function of joints – ed.) which often arise when spasticity has already existed for an extended time. Another area of application is inflammatory processes in the joints as well as spinal problems, where this method achieves very deep-reaching and long-lasting effects."

Dr. Garner combines Matrix Rhythm Therapy with Yoga therapy as a supplement. "Both are systemic therapies, which complement each other perfectly. In this context the application of Matrix Rhythm Therapy by the therapist is mainly used to release and relax shortenings and adhesions of tissue structures (muscles, tendons and fascias), with the patient playing a passive role; while the restored mobility of these structures is subsequently maintained by daily Yoga Asana exercises by the patient. Together both contribute to releasing blockages in the body and mind."

Meanwhile it is not only human beings, but also their four-legged friends who are benefiting from Matrix Rhythm Therapy. Horses, for example, have been successfully treated for problems with the back, tendons, muscles and scars, and poorly healing wounds. Thus Dr. Björn Nolting, who among other things has cared for German jumping and dressage horses in competitions, wrote: "thanks to this therapy method, a number of horses with injuries to the musculoskeletal system, that had repeatedly been treated without success by conventional therapies, regained their full capacities and could once again participate in sports competitions."

Good experience has also been made in small animal veterinary practice. Here dogs are especially good patients, like for example Bruno, a French bulldog who had birth defects causing back and hip problems. Thanks to Matrix Rhythm Therapy, which he enjoyed with grunts of pleasure, he could walk for 60 minutes at a time instead of only 20 minutes before.

Advertisement

Dr. Randoll Institut

Nonprofit Organization for
Matrix Research and Education

Your Institution for Cooperative Research and Education in Optimizing Cell Logistics

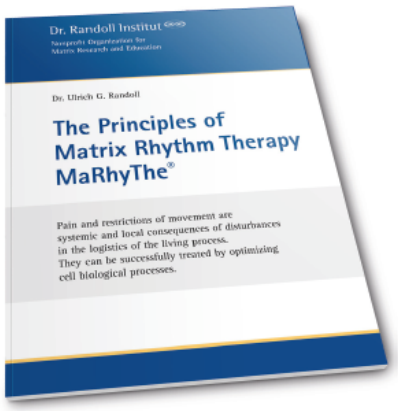
Already by the end of the 1990s Dr. Ulrich G. Randoll was convinced that the key to health is to be found on the level of cellular processes. It is possible to intervene into these processes via the medium surrounding the cells: the extra-cellular matrix. Dr. Randoll developed Matrix Rhythm Therapy and has trained over 3000 people in the utilization of this method. Since then he has presented the Matrix Concept in many national and international congresses and workshops. His book, "The Matrix Concept" has appeared in two languages.

The Dr. Randoll Institute has the task of promoting prevention, rehabilitation, therapy and diagnostics. The goal is to transfer the new knowledge of biological systems theory and fundamental cell-biological research into the domain of medical practice. The noninvasive, nature-conformal therapeutic methods which have been developed on the basis of earlier research projects are now being applied for the benefit of patients in a wide variety of branches of medicine, and further optimized.

The Dr. Randoll Institute organizes seminars, professional training courses and workshops with Dr. Randoll and his group of lecturers.

Request further information and event dates today!

- ❑ Send me programs and dates for coming training and information events
- ❑ Send me the free publication "The Principles of Matrix Rhythm Therapy"



The 32-page pamphlet explains the development and principles of Matrix Rhythm Therapy from its beginnings in university research to its successful application in clinical practice.

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