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Dermovital Therapy

Bio-energy from the air via the skin

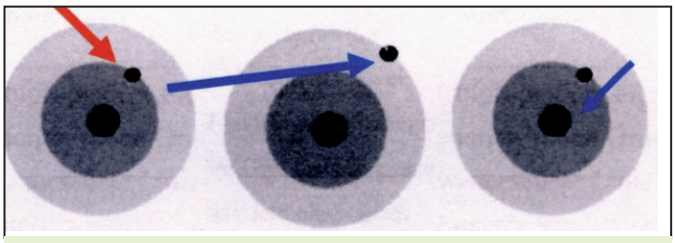
Foto: Dirk Stellah / Fotolia

The case history of B. K. (see introductory case report) gives food for thought and raises numerous questions. Is it true that established, conventional methods of treatment cannot offer any significant improvement in many cases of chronic disease? So what is it about the alternative methods that the patients often find more acceptable than conventional medicine? And in particular: what is it about the "Airnergy Stream" that brings about such successes?

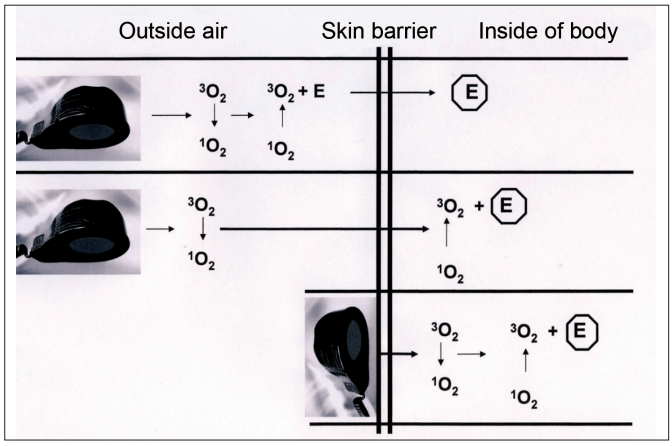
Theoretical background

All higher life forms require a constant supply of energy. This is required both for internal metabolic processes and external activities (generative, operative and repair metabolism, immunological defence reactions, neutralization of free radicals, cell division).
This energy is normally provided by the endogenous metabolism, whereby electrons are transferred from donors (nutritional carbohydrates and fats) to acceptors (like oxygen from the respiratory air), and this requires catalysts (sunlight, sensitizers). In exceptional situations (prevention, illness, functional disorders, stress, old age) artificially generated energy (activated oxygen) can (additionally) be incorporated.

The Airnergy principle is a method that artificially raises molecular oxygen from the atmosphere ($^3O_2$) into the active singlet state ($^1O_2$) for a short time, requiring a photosensitiser, light and oxygen. However, this state is only maintained for fractions of a second before the active oxygen reverts back to its base state ($^3O_2$). When this happens, energy is produced and this is released into the surrounding medium (respiratory air, water, skin, mucous membrane) and finds its way into the body.



Left: stable basic state, low-energy
Centre: arrival of a photon (quant) with a specific energy contribution (Airnergy device), transfer to an electron, increase in centrifugal force, change to a higher energy level, excited unstable state, high-energy.
Right: decay into the basic state, release of energy to the surrounding medium. *Photo: Jung*



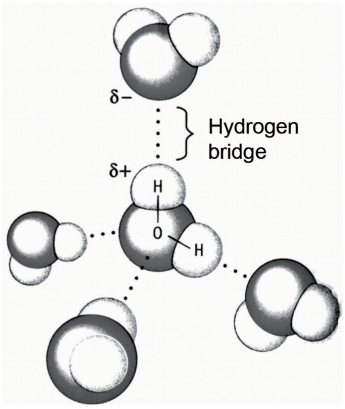
The three principal exchange surfaces for the transfer of externally produced energy into the organism are the lungs (approx. 75 m²), the gastrointestinal tract (approx. 250 m²) and the skin (approx. 2 m²). These are involved in the various processes for energising the body, either individually or in combination with each other:

- Spirovitalisation: provision of energy via respiration,
- Gastrovitalisation: provision of energy via the alimentary tract,
- Dermovitalisation: provision of energy via the skin (Stream).

The activation (energisation) of the body's own regulation processes, cellular metabolism and restoration of the energy balance have been theoretically examined in detail in association with spirovitalisation and have been confirmed many times in practice (summarising literature: "Modellvorstellungen zur Wirkweise der Spirovital-Therapy. Hypothesen, Studienergebnisse, theoretische Reflexionen", Airnergy-Eigenverlag 2012 [Proposed models for the action of Spirovital Therapy, hypotheses, study results, theoretical considerations," published by Airnergy, 2012]).

Introductory case report

„I first started to suffer from knee problems 12 years ago – when I was just 50. My right knee became very swollen, walking was painful and very soon it also started to hurt so much, even at rest, that I sought help from an orthopaedic consultant. He prescribed anti-inflammatory and painkilling drugs but these only stopped the pain for a short time so that eventually, later on that year, I underwent an arthroscopy. This involved smoothing down the cartilage and removing loose fragments of cartilage. The diagnosis was arthritis and I was told that this condition is difficult to slow down and impossible to cure. After a few years, relatively pain-free years, the same problem recurred and this time I was prescribed a new cure for the build-up of cartilage. Initially this seemed to help. It did not hurt when I was still but continued to get worse under load – such as climbing stairs and walking for longer distances.
Seven years after the first knee operation the pain was getting worse and worse and my quality of life more and more restricted. For the entire year I resorted to taking more and more painkillers. Not a day went by without pain. A year later I had another operation with the devastating prognosis that, although the cartilage could be smoothed once again, more of it would have to be taken removed. I was told I would probably need an artificial knee joint in the near future.
Finally I had had enough! I didn't want to accept that. After all I was only 58 years old! So I started to look for alternative methods and by chance I came upon the Airnergy Stream (Dermovital Therapy DVT). My knee was completely stiff by this time but, even after the first 5-minute application, I was once again able to move my knee without it hurting. I bought the machine for myself that year and have been using it three times a day ever since. My knee is mobile again, I can walk long distances and am practically pain free so that I no longer need painkillers and have not been near an orthopaedic practice again."



In the Dermovitalisation (DVT) process energy (biophotons) is generated in the same way as in spirovitalisation (Airnergy method), whereby there are theoretically two possible places of generation (externally outside the body or internally within the body). Similarly, the activated oxygen ($^1O_2$) can revert to its basic state either inside or outside the body. Energisation of the oxygen ($^3O_2 \rightarrow {}^1O_2$) could take place externally (outside the body) or internally (inside the body), and the decay into its basic state ($^1O_2 \rightarrow {}^3O_2$) also either externally or internally. The exact mechanism has not yet been fully explained. Therefore, the energy released externally, formed from external $^1O_2$ (singlet oxygen) is either transferred directly (transcutaneously) to the surface structures or the externally-formed $^1O_2$ (singlet oxygen) finds its way into the surface structures and releases energy there as it reverts to its basic state or else oxygen is activated internally in the surface structures and here releases into the surroundings the energy that is created when it reverts to its basic state.

The energy that is incorporated via the skin or released in the subcutaneous tissues can first of all have a direct effect locally (skin, vascular system), i.e. influence the local endothelium, local leukocytes and macrophages. Secondly it also disperses transcellularly into the wider surroundings and affects the local passive and active musculoskeletal system. Thirdly, current knowledge tells us that it is stored in hydrogen bridges and transported by the venous vascular system to the epiphysis, thus affecting the autonomic nervous system.

This storage of energy in this way via the formation of **hydrogen bridges** is possible because of the dipole nature of the water molecule, with both positive (H) and also negative charge distribution (O), the prerequisite for the attraction of oppositely charged areas of neighbouring molecules. This allows its short-term aggregation, in that each water molecule can briefly form bridges to a maximum of four other partners, so that clusters (up to several hundred molecules) are constantly being formed and broken down. They display manifestly social abilities such as information transfer, communication, cooperation, action, reaction and tolerance. Water is an ideal bioactive medium for the transmission of signals, energy and information and also for their storage. The energy (biophotons) that is released when the activated oxygen reverts to its basic state results in the enhanced formation and activity of hydrogen bridges and these then store more of this released energy in their clusters.

Practical experience from

A total of four user studies have been carried out to analyse the effectiveness, main indications for and the acceptance of Dermovital therapy (DVT).

Study A comprised 67 reports from patients, therapists treating themselves, sportsmen and women and managers (prevention), aged between 20 and 90 years (with a prevalence of ages 40 – 70), approximately 1:1 gender distribution, 180 stated disorders (approximately 2.7 per person) including an approximately equal number of organic and functional aspects.

Of the functional disorders (84 in total) 82 (98 %) involved pain and 2 impaired performance. The corresponding numbers for organic problems were 84 (out of a total of 96) acute disorders (88 %), 12 x chronic-degenerative aspects.

The alleviation or improvement of pain in functional disorders concern the musculoskeletal system and headaches, the improvement of acute organic problems in 66 % of cases (a total of 82 reports) to the musculoskeletal system, skin, mucous membrane and teeth in 92 % of cases (a total of 84 reports).

DVT combined with Spirovital therapy also demonstrated good results for tinnitus, apoplexy, heart attack, disc problems, post-operatively and for depressive conditions.

Study B looked at 22 detailed individual case reports from patients, with a total of 27 clinical pictures. 13 of the applications concerned the musculoskeletal system (arthritis, meniscopathy, heel spurs, trigger finger, lower back problems, knee injury, tendo-vaginitis), 7 to inflammation/wounds (skin, sinuses, respiratory tract, teeth, middle ear) 4 to pain (general pain, muscular, joints), 1 to tinnitus, 1 to "general detoxification" and 1 to prostate hypertrophy. In all cases the level of success was assessed as "good" to "very good".

In 6 cases DVT was used in combination with Spirovital therapy and/or Gastrovital therapy.

In **Study C** the treating therapists were asked for their objective assessment of the success of DVT treatment for their patients. 3 doctors, 1 naturopath, 1 expert assessor took part in the survey.

The preferred indications that were given were: degenerative and inflammatory diseases of the major joints; musculoskeletal pain; arthritis; tendinitis; pain around tendon insertions; tennis elbow; muscular pain;

Group A

Functional disorders
(98 % pain):
21 x active musculoskeletal system
21 x passive musculoskeletal system
12 x headaches
8 x gastrointestinal tract
8 x sensory organs/nerves
2 x heart
2 x teeth
2 x menstruation
6 x general
Musculoskeletal system
Headaches 66 %

Organic disorders
(88 % acute):
25 x immune system/inflammation ear nose throat
25 x musculoskeletal system (tension, strains, sprains, contusions, muscle cramps)
21 x skin (wounds, decubitus, scars, warts, fungus)
7 x injuries (joints) vitreous body, bones, ligaments)
7 x interventions (teeth, operations)
Musculoskeletal system, skin, mucous membrane, teeth 92 %

cervical spine syndrome; sinusitis; tooth extraction. Thus the successful applications were: musculoskeletal system (inflammation, degeneration, pain, flexibility; equally in the area of bones, cartilage, muscles, tendons, ligaments and joint capsules), respiratory organs (nasal sinuses, bronchitis, colds) and teeth (gingivitis, pain, extraction).

Study D looked at published reports of success with Dermovital therapy in animals (literature review). Compared with studies on humans, this was valuable because a placebo effect could be ruled out. The first case dealt with a very valuable racehorse, which had not been able to race for a long time because of a deep suppurating cut on the bulb of its hoof, despite several attempts at treating it with conventional methods (salve, operation). Following the application of a combined DVT, Spirovital and Gastrovital treatment, there was rapid subjective and objective improvement, rapid healing and the horse successfully resumed competitive racing.

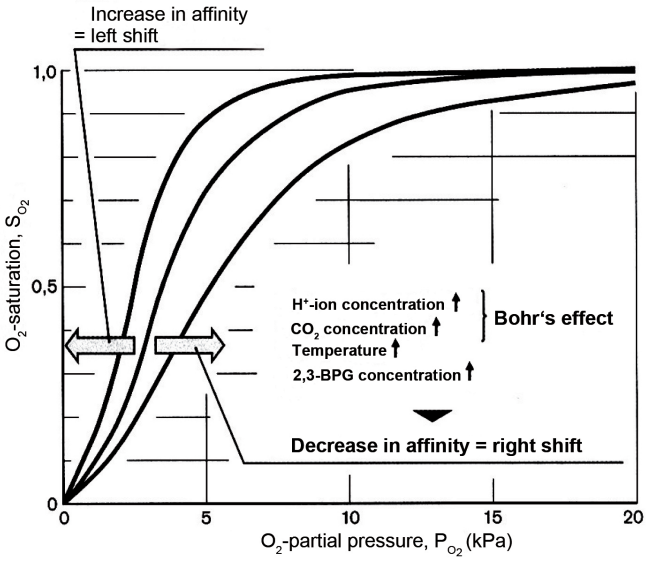
A 12-year-old dog was suffering from worsening arthritic problems with incipient paralysis of the hind quarters and a very sluggish bowel due to its immobility. After the treatment with DVT it was clearly suffering less pain, its scope of activity increased, its mobility improved and there was a noticeable improvement in its bowel function.

All four studies demonstrated a high level of acceptance by the patients. Improvements were noticed within a short time (after a few treatments), especially in the case of chronic diseases, in particular in the case of acute, inflammatory, painful attacks of these and despite the fact that the previous massive application of conventional treatments had not brought about any improvements – either in the objective or subjective sense. The most frequently quoted successes related to both functional and organic disorders associated with the musculoskeletal system, the immune system, the respiratory organs and teeth, from the point of view of diagnosis, to arthritis, joints, inflammatory conditions, injuries, bronchitis, ear nose throat conditions, tinnitus and dental pain, post-operatively and associated with paradontosis. The DVT effect occurred predominantly where there were acute problems, in particular if pain was also present.

Dermovital therapy, in particular, seems to influence the skin and mucous membranes as well as adjacent structures (muscle tissue, joints, ear nose throat, vessel endothelium) and (via the vascular system) autonomic centres (epiphysis), on the one hand due to the enhanced release of oxygen from the erythrocytes, and on the other via its better utilisation in the power stations of the cells (mitochondria), but most of all via the regulation of oxygen activation that largely determines cellular metabolism or by the deactivation of reactive oxygen species.

Reactions in which activated oxygen is thought to be involved

Quality of life (epiphysis, melanin), harmonisation of the circadian rhythms (melatonin, melanin), inflammatory processes, including pain (endothelium, NO, leukocytes, macrophages), health police (endothelium, leukocytes, macrophages), activation of the immune system (epiphysis, macrophages), protection of vessels (endothelium, NO), free radical neutralisation (epiphysis, melatonin), inhibition of thrombocyte aggregation (endothelium, NO).



Proven knowledge about the action mechanism

According to current knowledge, processes in which activated oxygen (singlet oxygen $^1O_2$) or the energy released from this (after decay back into the basic state) are reflected in an increase in quality of life, harmonisation of the circadian rhythms, in a reduction in inflammatory processes including pain, in the performance of "health policy" tasks, in the activation of the immune system, in the enhanced provision of efficient vascular protection, in the metabolic regulation of the "reactive oxygen species" and in the inhibition of thrombocyte aggregation (avoiding thromboses).

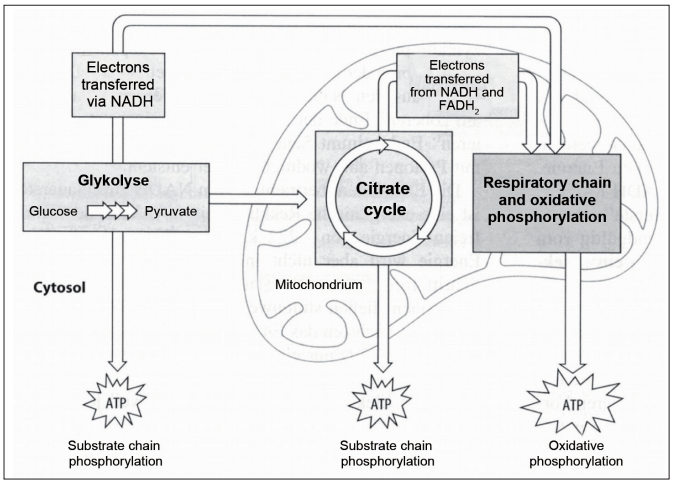
These $^1O_2$ (direct) or biophoton (indirect) effects in the body are completely in line with theoretical thinking about energy transport into the respective action centres (centres of the autonomic nervous system, the wider surroundings of the local skin gateways and directly on/in the skin or local hypodermis).

The action mechanisms of energisation using the Airnergy principle are theoretically derived for three critical, energy-dependent metabolic areas, which initiate and support these individual processes and this is confirmed by corresponding studies (increase in oxygen release, enhanced oxygen utilisation, stabilisation of oxidative balance).

The increased release of oxygen is achieved via the DVT-induced activation of 2,3-Biphosphoglycerate in the erythrocytes. Due to the enhanced peripheral release of oxygen from its bonds in the red blood corpuscles, this leads to a right-shift of the oxygen binding curve, so that, at the same partial oxygen pressure in the erythrocytes, oxygen saturation is reduced or – in other words – the release of oxygen into the tissue, i.e. into the individual cells, is increased.

Enhanced oxygen utilisation: because of the increased supply of oxygen to the mitochondria and due to the provision of biophotons using the Airnergy principle, there is enhanced cellular respiration (functional complex of glycolysis, citrate cycle and the respiratory chain) due to activation of the enzyme cytochromoxidase, which induces enhanced oxidative phosphorylation, the prerequisite for the generation of the main oxygen supplier of the intermediary metabolism (ATP).

Specifically, two mobile electron transporters (ubichinon Q

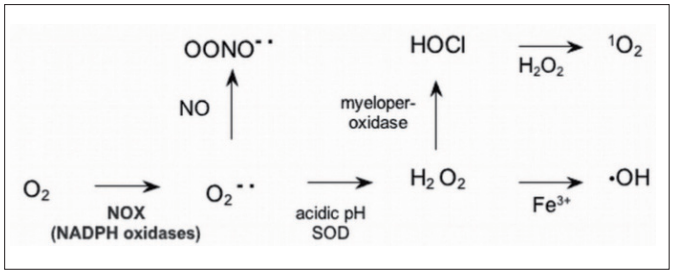


and cytochrome c) rapidly diffuse into the membrane or on it and thereby transfer electrons between complex I and III or III and IV of the respiratory chain. As a result of this process, protons are pumped out of the mitochondria matrix into the intermembrane space. At the end of the respiratory chain the electrons are transferred to O_2 (complex IV = cytochromoxidase) and reduce it to H2O (chemiosmosis: $O_2 + 4e + 4\,H^+ \rightarrow 2\,H_2O$).

Stabilisation of **oxidative equilibrium**: reactive oxygen species (free radicals) are very important in the metabolic process (activation) as in defending against threats (toxins, microbes). Primarily NADPH oxidase in involved as a catalyst in their generation, which means that this has an important function for maintaining health generally. However, in exceptional circumstances (under stress, in illness, older age, intensive physical exertion) and under extreme longer-term external impacts (UV radiation) and high toxic burdens (smoking, exhaust fumes) it causes the production of more free radicals than the body's compensatory processes can neutralise (primarily affecting the endothelial cells in the vessel wall, fibroblasts in the connective tissue, corneocytes in the epidermis), thus triggering functional disorders and diseases. Arachidonic acid, in particular, is activated under these conditions and lipid peroxidation initiated. Dermovital therapy stabilises the oxidative equilibrium, in that it prevents the over-production of reactive oxygen species by inhibiting NADPH oxidase activity.

Scientific studies

A. „Einwirkung von Singlet Oxygen Energy (SOE) auf Energiestatus und ROS-Produktion von Frendtransplantaten" [The effects of Singlet Oxygen Energy (SOE) on energy status and free radical production of xenotransplants] (Lingard/Rakotonirainy/Lukes/Lundgren/Wilton/Olausson/Soussi, Sweden, unpublished):



The ratio of creatine phosphate PCr to adenosine triphosphate ATP (indication of energy status and free radical production) was measured on 4 days following heart transplant operations between rats and hamsters on 26 subjects. These were divided into 5 groups (control, irradiation during removal only, irradiation also before reperfusion, irradiation also before the respective measurements on the next 4 days, irradiation additionally also after the measurements. In each case, the irradiation treatments with SOE photons (Scandinavian variant of Dermovital therapy) lasted for five minutes each. The best result was obtained for Group 3 (irradiation during removal, during reperfusion and before each of the measurements): PCr / ATP = 1.94 / 1.40 (p = 0.02). There was clearly an improvement in energy status with a simultaneous reduction in free radical production.

B. "Singlet Oxygen Energy Illumination during Ischemia Preserves High-Energy Phosphates in a Concordant Heart Xenotransplantation Model" (Lukes/Lundgren/Omerovic/Rakotonirainy/Karlsson-Parra/Olausson/Soussi, Laser Physics 13.1 (2003) 84-90:

Rats were transplanted with hamster hearts. The period of ischaemia between removal and reperfusion was a maximum of 10 minutes, the total ischaemic period max. 30 minutes (intermediate storage in 0.9 % NaCl solution at 4 °C).

Experiment 1: Group A (n = 7), SOE before reperfusion; Group B (n = 8), control without SOE.

Experiment 2: Group 1 (n = 5), SOE before reperfusion; Group 2 (n = 6): SOE after reperfusion.

The survival time was the same in all 4 groups. In Experiment 1 the PCr/ ATP ratio was higher in Group A than in Group B on Day 1 (1.99 ± 0.12 versus 1.43 ± 0.08; s = 0.007). In Experiment 2 the results were similar (PCr / ATP in G1 versus G2 = 1.94 ± 0.16 versus 1.40 ± 0.11; s – 0.009).

In order to bring about an effective increase in bioenergetic status, the SOE application must be given before reperfusion. The PCr/ATP ratio as an indicator of the potential of cellular phosphorylation is a good index for an even balance between energy production and energy utilisation. Small quantities of photons bring about a modification in cellular behaviour, large amounts are cytotoxic. Cytochrome C oxidase and NADH dehydrogenase are sensitive for photo-excitatory processes.

C. "Treatment of Asthma in Children with Light Acupuncture containing Singlet Oxygen Energy" (Schjelderup/Stadheim/Thorkildsen, Norway, unpublished):

This study covers 60 children with asthma aged up to 12 years, who were treated with SOE (application to specific acupuncture points, in each case 30 second exposure, two series of 6 treatments at an interval of two to three months, two to three treatments per week).

After the course of treatment, 85 % of the children were free from asthma or were at least very much improved. In all cases the therapeutic effect lasted for at least 1 year. There were no side effects. In a follow-up study with 134 children, all four therapists achieved similarly good results.

D. "Preservation of rat skeletal muscle energy metabolism by illumination" (Lindgard/Lundberg/Rakotonirainy / Elander / Soussi, Life Sciences 72 (2003) 2649-2658):

The study looked at rectus femoris preparations from rats, which had been subjected to a 5-hour ischaemia – exposure (4 groups + control with 6 preparations each:

NaCl, Perfadex, NaCl + SOE, Perfadex + SOE). The SOE application was 3 x 10 minutes (beginning, middle, end of ischaemia). Whereas the ATP constant following the ischaemic phase dropped slightly less in the irradiated Group than in the non-irradiated Group (from 18.0 ± 1.3 µmol/g dry weight to 5.0 ± 0.6 or 4.0 ± 0.6 respectively), the difference in the drop in PCr was statistically highly significant (from 82.5 ± 3.8 µmol/g dry weight to 2.1 ± 0.2 or 0.4 ± 0.2 respectively; p = 0.006.
The PCr and ATP levels are higher by a statistically significant amount following SOE application than without it. Singlet oxygen controlled energy clearly improves the cellular energy status of the muscle.
E. „In vivo 31pMRS-Nachweis der heilenden Wirkung von Singlet Oxygen Energy auf den Skelettmuskel einer Ratte während der Ischämie- und Reperfusionsphase“ [In vivo 31pMRS demonstration of the healing effect of Singlet Oxygen Energy on the skeletal muscle of a rat during the ischaemic and reperfusion phases] (Lindgard/Lundberg/Rakotonirainy/Soussi, Sweden, unpublished):
Muscle preparations from rats were treated with SOE before ischaemia and prior to, at the start of and 3 x during reperfusion (5 minutes each) (Test Group TG, n = 10). The parameters examined were PCr and ATP. The results were compared with the values from a Control Group that received no irradiation (CG, n = 10). During the ischaemic phase the PCr value for both Groups was the same (26 %), the ATP value was significantly higher in the irradiated Group (71 % as opposed to 51 %, p < 0.05). During reperfusion the PCr value in the unirradiated Group was 57 %, in the irradiated Group it was significantly higher at 79 % (p < 0.05). The corresponding values for ATP were 51 % and 72 % respectively (p < 0.05).
The energisation brought about by the singlet oxygen resulted in significantly higher values of PCr and ATP both during ischaemia and also during the reperfusion phase. In the Test Group there was a reduction in active oxygen species, synonymous with an increase in cellular energy status.

Summary

The Airnergy principle is the incorporation of the energy (biophotons) produced on the reversion of artificially generated activated oxygen (singlet oxygen, $^1O_2$) into the basic molecular state ($^3O_2$). In Spirovital therapy (SVT) this takes place with the inhaled air, in Dermovital therapy (DVT) via the skin. In DVT the effect first of all takes place in the local tissue (epidermis, dermis, endothelium and content of the main vessels), and then spreads to the area surrounding the topical point of application (active and passive musculoskeletal system) and (via storage in hydrogen bridges and their transport via the vascular system) to more distant organs (epiphysis, autonomic nervous system). The theoretical propositions are backed up by practical applied studies (subjective and objective success of treatments, especially for chronic functional complaints (pain in general, musculoskeletal pain, headaches, restricted mobility) and for acute organic conditions (inflammatory conditions, injuries, wounds, in particular affecting the musculoskeletal system, skin, mucous membranes and teeth. The probable underlying physiological/biochemical mechanism of these positive effects upon health could be the increase in O2 release into the erythrocytes (activation of 2,3-Biphosphoglycerate) induced by DVT, the increased O2 utilisation in the mitochondria (activation of cytochrome oxidase) and primarily the harmonisation of the formation and neutralisation of oxygen radicals (inhibition of NADPH oxidase). On the one hand, DVT offers an effective alternative to increase the quality of life of patients suffering from complaints that are difficult to treat with conventional methods, and, on the other, it offers a good form of immediate aid for acute symptoms with the proven prospect of rapid recovery.

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