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EDITORIAL

Constantin Munteanu

1. What are the most effective salt mines in Romania, in terms of health effects?

Each salt mine has its characteristics, but overall a high quality aimed at therapeutic utility saline aerosol composition, microclimate characteristics such as temperature, depth, currents of air, air purity, chemical composition. From Transylvanian salt mines visited, the best features have been found by the team of specialists from the National Institute of Rehabilitation, Physical Medicine and Balneoclimatology in Bucharest, where Turda salt mine. This situation is explained primarily by the fact that this is not a long time APPLIED IN salt exploitation, but also because its constituents intrinsic. Salt mine is also a suitable location for speleotherapy. But my arguments in favor of experimental mine in Turda. Research conducted at the cellular level in cultured lung fibroblasts taken from animals (Wistar rats) have shown that a standard regimen of speleotherapy cause beneficial effects at the cellular level.

2. How do you see the future of tourism related to the salt mines?

Mines that are used in therapy represents a natural resource to be exploited wise long-term sustainable basis, integrated circuits tourist complex, with large target audience for all ages and associated tourism cultural and relaxing. The future depends on the vision that manage these natural resources. To understand exactly what I mean enough to return to Salina Turda and to see what great opportunities for development were generated by modern spatial vision of the salt mines. The future depends on the infrastructure, the added elements, the units of accommodation, further investment in research, developing a strong brand, the accessibility of cultural elements. All these elements will bring added value.

3. What should do the authorities to encourage this type of tourism development?

Authorities are called primarily to work with those who manage tourism resources. Essential are projects, investment, infrastructure, local economic environment. It would be too much to say, but perhaps the authorities know best what to do. Must do their job well. A good example is this sesns is Mayor of Turda, Mr. Tudor Stefanie, with we spoke several times. Together we talked about a spa science park in Turda and I put a project on this issue.

4. How can foreign tourists be attracted to a much greater extent in Romanian salt mines?

In connection with this subject we have a special approach, shared by others, for example, Turda Mayor, Mr Tudor Stefanie, and CEO of SC Turda Salina Durga SA, Mr. Ovidiu Mera and other officials from Bucharest. Tourist activity must be woven with the activity of medical education. Scientific research also plays a key role.

5. What could be the obstacles in the development of this type of tourism?

We are still just at the starting point to talk about obstacles. There are many things to do. Obstacles can only be political or of bad faith. There should be very much determination, will and active involvement. Human life is full of obstacles and impediments. If we are determined in what we face, then everything is possible.
Romanian Association of Balneology
NATIONAL CONFERENCE OF BALNEOLOGY

SOVATA
MAY 10 - 12, 2012

PROGRAM

Contact: secretar@bioclima.ro
www.bioclima.ro
NATIONAL CONFERENCE OF BALNEOLOGY

Dear colleagues,

On behalf of the organizers, we have the honor to invite you to take part to the Tenth Edition of the Romanian National Conference of Balneology, with international participation, which will be held from May 10 to 12, 2012 at SOVATA.

The event is organized by the National Institute of Rehabilitation, Physical Medicine and Balneoclimatology from Bucharest together with the Romanian Association of Balneology.

The conference will be a special occasion to debate issues of interest in health and scientific research on the spa potential of our country, emphasizing the development prospects of this area.

The conference theme is: Exploring the clinical and research experience in Spa Resorts from Romania. Guidelines and protocols for good practice in modern medicine spa.

We expect you and we believe that your presence makes a successful event.

Romanian Association of Balneology

President
Conf. Dr. Delia Cinteză

National Institute of Rehabilitation, Physical Medicine and Balneoclimatology

Manager
Dr. Horia LĂZĂRESCU
NATIONAL CONFERENCE OF BALNEOLOGY

UNDER THE AEGIS OF
Ministry of Health
Ministry of Regional Development and Tourism
National Authority for Scientific Research

ORGANIZERS:

National Institute of Rehabilitation, Physical Medicine and Balneoclimatology
Romanian Association of Balneology

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Event Agenda

TEMA: Exploring the clinical and research experience in Spa Resorts from Romania. Guidelines and protocols for good practice in modern medicine spa.

10.05.2012
8.00 – 9.00 Opening
9.00 – 11.00
P1 Medical and research activities at Sovata Spa Resort
11.30 – 13.30
P2 Methodologies applied with thermo mineral water in musculoskeletal disorders in Romanian resorts
15.00 – 17.00
P3 Scientific research and therapeutic applications of Speleotherapy

11.05.2012
9.00 – 11.00
P4 Clinical trials methodology for applying chlorine therapeutic mineral waters
11.30 – 13.30
P5 Clinical trials methodology for applying sulphurous mineral water
15.00 – 17.00
P6 Clinical trials methodology for implementing CO2 in different pathologies

12.05.2012
9.00 – 11.00
P7 Basic research of natural therapeutic factors
11.30 – 13.30
P8 Medical rehabilitation of rheumatic and orthopedic diseases
15.00 – 17.00
P9 Medical rehabilitation phase III cardiovascular and cerebrovascular diseases
National Conference of Balneology

Paper presentation:

- The duration of oral communications is 10 minutes and of general essays is 20 minutes.
- Scientific abstracts, written in Romanian / English, will be sent to the secretariat of the organizing committee by e-mail: secretar@bioclima.ro, until April 25, 2012 and will be published in the conference abstracts volume.
- Abstract: 300 words maximum, Times New Roman, 12, without diacritics, Title capitalized. Author names: first name followed by last name. Abstract structure: Introduction, Objectives, Materials and Methods, Results, Conclusions.
- The presentations will have PowerPoint support in Romanian or English and will be uploaded at the time of registration at the event.
- Papers in full may be sent to the secretariat of the organizing committee by e-mail: secretar@bioclima.ro, until May 30, 2012 and will be published in Balneo-Research Journal.
NATIONAL CONFERENCE OF BALNEOLOGY

General Informations

Registration forms will be sent to the secretariat of the organizing committee until April 25, 2012, by e-mail: secretar@bioclima.ro

Offers of sponsorship:
- Stand: 100 Euro / mp
- Presentation 15 min. – 300 Euro
- Presentation 30 min. – 500 Euro
- Advertisement page in the journal volume dedicated to the event - 200 Euro
- Promotional materials in the folder: 75 Euro

Fees:
- PRIMARY OR SPECIALIST DOCTOR: 300 RON
- RESIDENT DOCTOR, MEDICAL ASSISTANT: 100 RON
- Biologist, chemist, other personnel with higher education: 100 RON

Participation fees can be paid:
- By bank transfer on behalf of the Romanian Association of Balneology, account IBAN no. RO92RNCB0067118770120001 opened at BCR - Branch Dr. Felix, CIF 27579487, located in the Ion Mihalache Blvd, no. 11A, Sector 1, Bucharest, noting: conference fee;
- Cash at registration, if it has previously been sent application form by e-mail.

Will be granted credits of continuing medical education (EMC) in the basis of the diploma of participation.

Access to Sovata can be:
- By Road: DN 13 Odorheiu Secuiesc – Tg. Mureș at 51 km by Tg. Mureș;
- By Rail: Sovata railway station on the line Mediaș – Praid
- By Air: Tg. Mureș Airport
NATIONAL CONFERENCE OF BALNEOLOGY

Event registration

- Registration will be at the secretariat of the organizing committee of the Danubius hotel Reception on May 9, 2012 between 16.00 - 18.00 and on May 10 between 8.00 - 9.00

Accommodation

- Event special offer:

  Hotel Danubius HSR Sovata****

  Single: 35 EURO/ night  
  Double: 40 EURO/ night

  Prices include breakfast, access to swimming pools, saunas and fitness room hotel, spa tax, VAT.

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TITLE OF PRESENTATION ________________________________

Type of presentation: oral reports /communications / poster

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ESCHARS TREATMENT

Dr. Liliana Cioc¹
¹National Institute of Rehabilitation, Physical Medicine and Balneoclimatology

Abstract

This article carry out a modern research and principles of the main solutions for the treatment of eschars, including cleaning solutions for wound debridement, dressings, antibiotics, surgery and adjuvant therapies. The approach taken to achieve the research is justified by the fact that, despite current interest and progress in medicine, surgery, medical care and education for self-care, pressure sores remain a major cause of morbidity and mortality, affecting in particular, people with prolonged immobilization and the elderly. The conclusions of the paper are oriented towards to analysis of the efficiency of each treatment solutions presented in active control eschars and negative effects they generate.

0. Introduction

Despite the current interest and progress in medicine, surgery, medical care and education for self-care, pressure eschars remain a major cause of morbidity and mortality. Pressure particularly affect people with prolonged immobilization and the elderly. (1) Treatments used traditionally included innovative mattresses, ointments, creams, dressings, ultrasound, ultraviolet lamps and surgery.

In choosing a treatment strategy, it is necessary to consider both wound status, and the treatment purpose, such as prevention or removal of necrotic tissue. (2,3)

Regarding the algorithm for evaluation and treatment of eschars, it is necessary to consider the following elements:

1. wound care can be divided into surgical and non surgical methods;
2. wound care is often non-surgical stage I and II;
3. in stage III and IV lesions may require surgery;
4. approximately 70% -90% of pressure ulcers are superficial and heal of non-surgical methods.

1. Principles and treatment solutions

Treatment of eschars aims to reduce risk factors, mobilization, wound care and surgical treatment.

A. Solutions for wound cleansing.

In the context of the applicable principles of treatment, there are multiple solutions to clean wounds, as follows:

a) saline solutions, which act as cleaning, thus facilitating healing (3,4)
b) Povidone-iodine, which is useful against bacteria, fungi or viruses. Dilution is recommended and its use should be discontinued when granulation tissue appears.
(3) laboratory data shows that povidone-iodine is toxic to fibroblasts in vitro, a finding which has theoretical implications for wound healing. (4)
c) acetic acid (0.5%) is particularly effective against Pseudomonas aeruginosa, a particularly difficult and common body. Acetic acid can change the color of tissue and may mask the potential superinfection. (4)
d) sodium hypochlorite (2.5%) is another oxidizing agent available for cleaning. Although it has some germicidal activity is mainly used for debridement of necrotic tissue. Before you use zinc oxide should be placed around the margins of the wound, in order to reduce the area of irritation. (3)

Normal saline solution should be used for rinsing after previously used sodium hypochlorite.

Market analysis revealed the availability of a variety of cleaning agents, indicating that none has proved more effective than another, while the expert opinion favoring saline. (5)

B. Debridement

Wound debridement goal is to remove all materials resulting in infection, delayed granulation, preventing healing. There are three debridement procedures that are commonly used: enzymatic debridement, mechanical debridement blocking agents, and surgical debridement.

Enzymatic debridement using various chemical agents that proteolytic enzymes, which act by attacking collagen and liquefying necrotic tissue.
debris, without damaging the granulation tissue. Proteolytic enzymes is a chemical method of debridement. The action of these enzymes are specifically addressed in necrotic tissue. (3.5)

Non-selective mechanical debridement, the necrotic tissue is weakened and eliminated, is generally achieved by strong irrigation treatments, or by using dressings. The use of these dressings involve introducing a wet gauze injury, then it will be left to dry. Several hours later, when the the bandage is removed, necrotic debris adhere to the bandage, thus eliminating. Solutions commonly used for bandages include normal saline and 0.25% acetic acid solution. Povidone-iodine solution can be used for debridement of infected ulcers. (5)

Surgical debridement, although the most effective way to remove necrotic tissue is contraindicated in some patients, mainly those who can not resist the blood loss that may occur during the procedure. Devitalized tissue wet supports proliferation and growth of pathogens. Removal of devitalized tissue that is a prerequisite for growth of new tissue (6.7)

C. Bandages.

The transparent adhesive bandages are occlusive and semi-permeable. They allow gas exchange and transfer of water vapor in the skin, preventing maceration of healthy skin around the wound. In addition, these dressings are not absorbing as they reduce the incidence of secondary infection. Transparent adhesive Bandages do not work well in patients with wounds with significant exudate. (2)

Hydrocolloid bandages hidroactive containing particles interacting with exudate to form a gel. These bandages provide absorption in trace amounts or moderate exudate and maintain the wound surface moist. This gel can be fibrilolitice properties that enhance wound healing. (2.8)

Gel bandages are available in the form of sheets, granules, and gel. All forms of bandages keep the wound surface moist gel. Some gel bandages provide some insulation, and provide protection against bacterial invasion. All bandages gel ensures atraumatic removal. (2,5,9).

Bandages based on calcium alginate (eg Sorbsan) are semiocclusive, very absorbent, and easy to use. (10.11) They are natural, sterile and contain derived from brown seaweed. Bandages with calcium alginate are highly effective in treating exudative and can be used on wounds that are contaminated or infected. (10)

D. Antibiotic treatment

Silver sulfadiazine has an excellent antimicrobial spectrum of activity, low toxicity. Silver sulfadiazine inhibits DNA replication and causes changes in cell membrane of Staphylococcus aureus, Escherichia coli, Candida albicans, Klebsiella, Pseudomonas, and Proteus species, and Enterobacteriaceae.

Systemic antibiotics administered to combat wound infection can be divided into five main groups: penicillins, cephalosporins, aminoglycosides, fluoroquinolones, and sulfonamides. Other antibiotics include clindamycin, metronidazole and trimethoprim.

E. Surgical treatment

In general, the stages I and II of pressure ulcers can be treated non-surgically. In stages III and IV of pressure ulcers, due both to the high rate of recurrence and the length of time required to close wounds often require surgery. Proper selection of surgical candidates is important due to the direct effect on extending the recovery time and costs. In addition, in case of necessity of achievement musculocutan flaps, they can be made only limited consequence that the person repeated pressure ulcers, or as a result of additional risk factors in addition to age.

Surgical procedures that are used to treat pressure eschars include direct closure, skin grafting, skin flaps, flaps musculocutan, fasciocutan flaps.

Factors affecting postoperative healing include smoking, spasticity, nutritional deficits and bacterial colonization. (12)

F. Adjuvant therapy

An alternative to the above treatment solutions, is the adjuvant therapies, which have long been described in the literature. Based on available clinical evidence, only electrical stimulation is recommended and should be considered in stages III and IV pressure ulcers if they proved unresponsive to conventional therapy.

Hydrotherapy should be considered for pressure ulcers containing large amounts of necrotic tissue, exudate and, as if it can help debridement. However, once the wound is clean and has healthy granulation tissue, water can cause damage to new tissue, and treatment
should be discontinued. Therapeutic effectiveness of hyperbaric oxygen, ultraviolet of infrared spectrum and laser irradiation was not sufficiently established so that they can be recommended for the treatment of pressure ulcers.

Since the publication AHCPR guidelines, there are two new therapies for ulcers pressure healing adjuvant that had initial evidence of efficacy: vacuum-assisted therapy (therapy under atmospheric pressure) and normothermia (12).

_Vacuum-therapy_ or under atmospheric pressure therapy involves applying a special bandage kit, put a sheet over the adhesive transparent seal the wound. The drain of wound is connected to the negative pressure and the canister. After the starting machine, the wound fluid in excess is drawn canister. Through this system is improved blood flow in the wound, which stimulates wound healing. This method increases the blood flow in tissue from the wound and adjacent tissue, thereby increasing oxygen and nutrients supply, as well the clearance of bacteria from infected wounds, resulting in an environment that promotes wound healing (12). This method proved to be profitable in chronic wound care at home (12).

_Normothermia_ requires the use a bandage that radiates heat, in order to speed up wound healing. Normothermia effectiveness in treating pressure ulcers was demonstrated in a study at stages III and IV, which revealed average wound area reduction of 61% over a period of 4 weeks (12).

### 3. Conclusions

Research carried out in this article revealed that healing pressure ulcers is influenced by multiple factors. In this context, a particularly important role is care in a multidisciplinary approach, involving both skin care, reducing pressure and ensuring adequate nutritional support. Prevention is the key element of effective control of pressure ulcers, which is why it is necessary for it to start with a complete medical history.

Also, special attention should be given to pathophysiological factors involved in the development of pressure ulcers. Patients with increased risk should be mobilized frequently and at the same time, to benefit from adequate nutritional support, and a clean, dry skin storage. For patients which develops pressure ulcers, these preventive measures should be used with general care techniques presented in this article. Non-operative wounds care may involve local therapy, while necrotic or infected wounds for drainage, treatment may also include: agents absorption of calcium alginate bandages with, cover wounds, debridement and antimicrobial treatment.

Also, to treatment regimen can be added and other therapeutic modalities such as special mattresses or physical therapy.

### References:


HELPING DEVICES OF WALKING

Dr. Irina Petrușcă

1Institutul Național de Recuperare, Medicina Fizică și Balneoclimatologie

Abstract

Helpful resources are devices used to increase the independence of patients.

Batavia and Hammer have established four important criteria in the evaluation and selection of supported devices (1): 1. Effectiveness, 2. Accessibility, 3. Efficiency, 4. Reliability.

The goals of helpful walking means are to improve balance, providing a sensitive feedback, reducing pain.

The stick enlarges the support basis and decreases stress on the inferior affected limb opposite (5,6,9) and can download up to 25% of body weight of the patient.

The crutch has two points in contact with the body providing a stability better than stick (5,6,10,11). Axillary crutches have the main advantage that allows you to download up to 80% weight, providing a better trunk than nonaxilare allowing a transfer of 40-50% of patient weight.

Walk framework is the best device for the patient confused or having an unsteady gait can be used for early recovery work. Has the advantage that it provides maximum support of the patient.

Wheelchair is used by patients who ambulatia is impossible or possible but for short distances. All wheelchairs need a system that stands unique and should provide adequate stability and increase functionality.

Orthotic of lower limb aims to keep normal relations, both static and dynamic balance between joints-knee-ankle-foot. They can be used to correct an incorrect walk pattern and to increase efficiency of walking.

Type of chosen helper device depend on the degree of assistance in general, as disability is greater, the more complexity of chosen device is greater (2, 3, 4, 5, 6, 7).

Deficiențele care necesita dispozitive ajutatoare de mers sunt:

- Slight deficiencies of equilibrium/ stability - stick with a support points;
- Moderately deficiency of equilibrium / stability - stick with 4 / 4 of
- Moderate to severe deficiency - hemi frame / frame
- muscle strength decrease in the both inferior limbs - bilateral crutches or frame (eventually with wheels)
- Severe impairment of stability - frame (possibly with wheels)
- Punch / hand function impaired - platform framework
- Difficulty in climbing stairs - stairs climbed special frame (8).

Stick enlarges the support basis and decreases stress on the affected limb opposite (5,6,9) and can download up to 25% of body weight of the patient. Stick length is important because improper use leads to the formation of an incorrect walk pattern. To determine the optimal size is measured in distance from tip of the stick great trochanter with the patient standing, the elbow flexion of 20 degrees.
The instructions for use: the side opposite the affected limb, while the stick will move the opposite limb, the first step being made by the unaffected limb. The climbing and descending stairs rule is 'up good, down the river' (up and down the free limb to ill limb, or possibly just after it).

There are several types of sticks:
- Stick in C, J, standard with a single point of support
- Stick with functional gripping or resistive
- Stick with 3/4 points of support.

Indications for use of the stick: degenerative diseases, neurological disorders, orthopedic problems, etc..

The crutch has two points in contact with the body providing a stability better than stick (5,6,10,11). There are two commonly used types of crutches: axillary and nonaxilare. Axillary crutches have the main advantage that allows downloading up to 80% weight, providing a better support of trunk than nonaxilare. Patients should be advised of the possibility of brachial neuropathy compression and advised to avoid all the rest and support the body weight crutches.

Crutches length is calculated as follows: distance from the axillary fold of 15 cm side of the finger 5, play the hand that you will be placed so that the elbow flexion to be 30 degrees, fist in full extension and flexion finger. Manner of use is: collect axillary piece between the arms and chest and push down with your hand for hand play.

Nonaxilare crutches allow a transfer of 40-50% of patient weight providing a good trunk control. Crutches Lofstrand / Canadian are the most popular and commonly used bilaterally. Have the advantage of ensuring a safe and easy ambulate (12), substitute easily the stick provide but provide lower support for than ambulate axillary crutches.

Kenney stick (Wooden forearm orthosis) - looks like axillary crutches, but the proximal end with a leather band placed around the proximal portion of the forearm. Are indicated to patients who have a particularly high strength on upper limb but low on the distal.

Carja cu platforma este folosit de pacientii cu o prehensiune deficitara si celor cu flexum la nivelul cotului, avand avantajul ca greutatea pacientului este suportata in majoritate de antebrat in loc de mana cum se intampla in cazul celorlalte tipuri de carje.

Everett crutch (triceps weakness orthosis for) - looks like a crutch but ends proximal axillary in the third average arm and who are two cuffs at elbow level and who are two cuffs at elbow level to keep the elbow in extension.

The walk framework is the best device for the patient confused or having an unsteady gait due to disorders of equilibrium can be used for early recovery work. Has the advantage that it provides maximum support of the patient. Among the disadvantages are: slow and awkward walk, creates an incorrect posture and walk pattern, has limited use inside and can not be safely used for climbing and descending of stairs.
the ideal height should provide of 20 degrees flexion at elbow level.

The rolling stock presents wheels walk at the limbs level that promote frame; strength and equilibrium are needed for handling as movement required by the standard. But has the disadvantage that it can create instability if not used properly and require supervised training sessions to ensure patient safety.

Framework walk with support for forearms is indicated for patients with deformities in the hand, wrist and forearm, pain or those with flexum elbow. The only downside of this is heavy.

The framework walk for up and down of stairs is indicated young patients with paraplegia. This device requires a good balance and good strength in the upper limbs.

**The wheelchair** is used by patients who ambulation is impossible or possible but for short distances. All wheelchairs need a system that stands unique to be:
- to provide adequate support patient in a sitting position
- to maintain the orthopedic alignment and adjust any fixed asymmetry
- to ensure adequate stability and increase functionality
- to ensure proper distribution of pressure, comfort and increase tolerance to stay in a sitting position (13).

![Figure 4. Wheelchair](image-url)

A defective distribution of pressure can lead to the development of pressure eschars. Setting in motion the armchair can be done manually or electrically.

**Orthoses** are external devices applied to a segment of the body to prevent or correct malfunctions of that segment. The purpose of orthotic limb consists of:
- restoration of functions and normal abilities by controlling movement, and deformity correction of any malfunctions of different compensation
- obtaining of a comfortable device, easy to wear and aesthetic as possible. (15)

![Figure 5. The ankle orthosis (limb)](image-url)

Orthotic of the inferior limb aims to keeping normal relations, both static and dynamic between hip-knee-ankle-foot joints. They can be used to correct an incorrect walk pattern and walking to increase efficiency.

Types of orthoses depending on the segment which is applied to (American Orthotic and Prosthetic Association):
- FO= foot orthosis
- KO=knee orthosis
- HO=hip orthosis
- AFO= ankle foot orthosis
- KAFÖ=orthosis for knee-ankle-foot
- HKAFÖ= hip-knee-ankle-foot orthosis
- RGO= reciprocal walk orthosis.

Inferior limbs orthoses should be used only in specific management of selected disorders such as: loading orthoses, orthotics for fracture orthosis for joint deformities, congenital dislocation of hip orthosis for.

**Conclusions**

The purpose of all these helpful walk devices presented here is to increase the independence of patients by taking and transmits body weight and provide support. Them recommendation is made taking into account the necessary degree of balance (equilibrium) and the proportion of discharging the needed (discharge weight) (16).

In general, the degree of disability is higher, so requires a complex device walk.
References:


8. Divakara Kedlaya, MBBS; Chief Editor: Consuelo T Lorenzo, MD more...- Assistive Devices to improve independence http://emedscape.medscape.com/article/325247-overview


Hydrotherapy is considered the oldest therapeutic method, being used as a remedy for various common ailments since ancient Greek culture, Japanese, induced, Romanian (Champion, 1998). Numerous research studies have highlighted the role it has hydrotherapy on muscle relaxation in treating musculoskeletal and neurological disorders, sore throat, backache, arthritis, head injury, spasticity, etc. vascular accidents. (Moor et al, 1964).

"You waters! You that reassuring us, bringing to us strength, health, joy and grandeur."

RIG VEDA

Hydrotherapy is a therapeutic method that uses water at different temperatures and in different states of aggregation (liquid, solid or gaseous) to treat certain diseases. The water used may be fresh, mineral or marine, pure or mixed with other substances or herbs and medicinal: infusions or decoctions (chamomile, marshmallow, walnut leaf, etc.) And various mixtures of herbs, also salt, iodine, sulfur, mud, gas, etc.

Hydrotherapy as all forms of therapy are combined using warm or cold, to treat various diseases. Hydrotherapy is also considered a branch of natural medicine based on water use in therapy.

Interestingly, a search on the Internet hydrotherapy lead to over three million and a half results, which show the importance of this term.

Use of this method of treatment has gone through several stages over time, from empirical to scientifically. Scientific foundations of hydrotherapy have been raised by W. Winternitz, of Vienna Faculty of Medicine, the work phisiologischer auf und Die Hydrotherapie Klinischer Grundlage, published in 1877. Also an important contribution to the development of scientific and hydrotherapy techniques have had and the work of French doctors as: Fleury Dalmas, Robin, Beni-Bard, German: Liebermeister and Zimssen etc.

In our country, the first scientific hydrotherapeutical paper - Hydrotherapy medical, published in 1904, belongs to doctor Baiulescu Gh. The treaty describes the idriatice procedures, their influence on the nervous system, blood circulation, blood morphological conditions, organic exchange, respiration, muscle Force, temperature, secretions and excretions. The doctor makes a presentation idriatice procedures, those used by the Viennese School, from the French and American.

Principle of this method of therapy is based on fluid properties: mechanical (thermo conductivity of water is 30 times greater than air, heat capacity, 8 times greater than air), heat and chemicals. The pressure of gravity on the bones in water, can be reduced by 90%. Physiological fluid factor is exercised through the skin, the skin is the first organ to which the contact, the structure characteristic of the vast network of vascular and nerve receptors can be obtained many and varied responses, local and general reactions.

Local and general action occurs in the metabolism and systems: muscular, cardiovascular, neros, respiratory etc.

i. Effect on cardiovascular system: peripheral circulation and heart. Rich vascular network skin reaction to cold or of warmer can be exciting vasoconstriction or vasodilation. Vasoconstriction is the initial phase, which is longer under the influence of "cold" and very short, sometimes almost macroscopically unnoticed, under the action of warmer exciting. By bristles erector muscle contraction is impeded heat loss by reducing surface radiation skin.

Active vasodilation is the phase in which there is a redness (flushing) of the skin (pink-red), under the action of hot or cold exciting. Is of longer duration and is the most important of stages. Passive or paralytic vasodilatation usually follows the previous one, if the action exciting factor is prolonged or if it is too brutal. Skin becomes red-violet or marble. The reaction you want and not have to avoid in hydrotherapy, being an indication that the procedure should be discontinued.

Action on the heart: "cold" soothes and eases the heart work (heart rate accelerates, etc.), hot and tired heart procedures.
The procedures action on blood: blood composition was deviated to acidosis through procedures cold and to alkalosis through hot procedures (due to hyperventilation that lowers CO2). Increases in blood clotting procedures warm and back again in the cold.

ii. The action of breathing: the cold, deep inspiration and after a short pause, respiratory rate increases. Hot procedures triggers from the beginning, a frequent and shallow breathing. The most affecting breathing is neck, probably close to the bulb.

iii. Action on the nervous system: application of cold decreases nerve sensitivity and has an anesthetic effect. Cold was one of the first means anesthetics used in surgery. Heat has a stimulating effect in analgesic processes is acute and chronic inflammatory processes.

iv. Action on metabolism: cold procedures cause an increase in metabolism, with higher consumption of oxygen. Increases metabolic procedures produce lighter warm by consuming carbohydrates and lipids. Indifferent procedures do not alter metabolism.

Depending on water temperature were varied ways to use this therapeutic factor. The procedures used in hydrotherapy are divided into general, most demanding, which is usually prescribed in the morning and local or partial. The most commonly used are:

1. compresses- hot and cold or alternating
2. packing- lower / upper / in 3 quarters / full trunk
3. friction- partial or complete
4. băi terapeutice- reci (sub 20 ºC), racaroase (20-30 ºC), intermediare (34-37 ºC), calde (38-39 ºC), fierbinti (40 ºC).

1. The compresses are the simplest procedures and are of several types depending on water temperature and area of application. Cold compress: analgesic effect, vasoconstriction, so antihemoragic and antifreeze-flammable. As guidance, is used in any acute inflammatory process. Sometimes replaced with ice pack. Change from 5 to 10 minutes, when it was dry. Is indicated in abscesses, flegmone, acute appendicitis, digestive, brain bleeding, etc.

A warm compress is acting analgesic, relaxing, sedation, anti-ing, vasodilators, for which is indicated in all chronic inflammatory processes (hepatic, renal colic etc.).

Prießnitz compress is stimulating, toning and is like to the Prießnitz name (which used it for the first time). It is a cold compress covered with one dry. As an action, the first contact with skin vasoconstriction is produced, then heated (ie vasodilation), heated to evaporate water from the compressor, leading to skin cooling and so on, until they dry. Is indicated in subacute and chronic inflammation.

2. Package procedures are wet and dry wet; sheets are used as blanket covering the patient directly or after a particular technique, there are packs with different substances (paraffin, mud). Their action is highly vasodilator, with good anti inflammatory effect, analgesic resorbitiv and relaxing. Used in all chronic inflammatory processes: arthritis, osteoarthritis, neuralgia, stiff etc.. The same is done with impahetarile mud and sand. After these procedures warm mandatory should follow washing.
3. Frictions are procedures which acts both by thermal factor, and by the mechanic. They are always cold, using wet cloth over that run friction, long strokes, sliding palms until they are heated (active vasodilation). After that, rubbed region wipe and covers. Friction can be partial (hands, legs, chest etc.) or total (complete). It can perform bedside immobilized (fractures, rheumatism).

4. Baths are the most requested procedures in hydrotherapy. They are of several types: simple (regular water), drug, with different substances (salt, iodine, sulfur, etc.), complete or partial (hands, legs, seat), indifference to temperature (35-37 °C), warm (38-40 °C) or cold (below 22 °C). Baths actions by three factors: thermal, chemical and mechanical (hydrostatic pressure upwards pressure, movement of water in the bathroom).

Indifferent baths (35-37 °C) have a sedative effect, relaxing, where the indications for musculoskeletal diseases, neurosis etc. Warm baths have action and indications for warmer procedures (chronic musculoskeletal, orthopedic - sequels, paresis, paralysis, chronic rheumatism.

Kinetotherapeutic bath is to which is added passive water movements and active movements performed by the patient, for periods of 4 to 5 minutes (meaning 5 minutes sitting in the bathroom, 5 minutes passive movements, 5 minute break and 5 minutes active movements - her total of 20 minutes), the bathroom chiropractic is used especially in year chiloe, muscle stiffness, joint, for ease of movement in water.

Cold baths (general) are very drastic procedure, rarely used. Cool baths (32-34 °C) are: halbbad-x (half bath) and bath brush (also half the water depth reaching the bathroom (25 to 30 mm). Are laborious procedures, with good stimulant effect. Of course that full baths will be indicated in cardiac, atherosclerotic etc.

Partial baths for hands or legs, are easy procedure that can be warm, cold and uphill. Baths upward (Hauffe), the temperature is increased gradually from 37 to 40 °C, are used in bronchial asthma, angina attacks, for their reaction consensual. The other - warm or cold - are indications, in general, identical to the procedures at this temperature - in chronic or acute inflammation of the areas where applied (hands, legs or pelvic area).

Alternating baths of legs to knee, consisting of their introduction in the first bucket of warm (2-3 minutes), then in the cold water (20-30 seconds) several times in a row, ending cool boat. Indications: headache, leg paresis.

Sitz baths can be done in a special dish or a laver. The cold bats, lasting 1-2 minutes, is recommended for: acute genital disease, uterine bleeding, hemorrhoids (in painful crisis). The warmer bats, lasting 5-15 minutes, recommended in cases of cystitis, renal colic, chronic prostatitis, but are contraindicated coronary patients.

Steam baths, partial or general, can be made all at home using improvised equipment.

Steam baths to head are indicated in flu, colds, sinusitis and acute bronchitis. The patient sits with head bent over a pot of hot water, which were made a few drops of essence of the desired plant or decoction that, covered with a thick towel. The procedure consists of inhaling of water vapors containing active excipients of that plant. For a partial bath, half body or general need a chair or a wooden rods provided with several openings. Under the seat on which the patient sits, is placed the bowl with hot water and essence or plant decoction. For partial bath the
patient will be wrapped up at the waist with a thick blanket, and for the general to the neck. Such baths are indicated in flu, obesity and cellulite. The duration can be 5-15 minutes.

Medicinal baths: are also very used to them, adding: a chemical substance (I, NaCl, S, etc.), medicinal plants (infusions or decoctions), gases (CO₂, O₂, air). They work by all known factors: thermal, chemical and mechanical.

Drugs baths (with iodine, salt, sulfur, starch etc..) Are used, especially in rheumatic disease, skin diseases etc. and can do in house. Are known, the people baths with walnut leaves (containing iodine).

Baths with medicinal plants (fan flower, mallow, fir tree, chamomile, peppermint) have a good a sedative effect and relaxing. Are made at temperatures between 36-37 °C, because contained essences are volatilize at a higher temperature.

Chronic rheumatic disease, neuroses, H.T.A. compensated, etc. ulcerative disease. Baths with gas bubbles (CO₂, O₂, air) are prescribed, almost all indifferent temperature (35 - 37 °C), other the gas evaporates(gas loses heat trap held).

Gas bubbles in the bathroom break of patient skin, exerting a fine massage, roller, which gives active hyperemia, decreasing peripheral dam. Thus T.A. decreases heart rate becomes bradycardia, diastole is larger and richer coronary flow (is results that are obtained with digital). They have a good calming effect. Hence, these baths indication: hypertension, peripheral circulatory disorders (arthritis etc.), sequelae of phlebitis, neuroses, etc. ulcer disease. Gas are obtained from normal bottles (CO₂, O₂).

Similar procedures are afuziunele, cataplasmele, showers.

Afuziuni consists in spreading a column of water without pressure on certain parts of the body, with a suitable rubber hose to a tap or a sprinkler rosette which was removed. Can be made with cold water or warm and cold water alternately. At home can be done cold fusion in the legs by the patient himself.

Water column will be projected starting from the fingers, then the front of leg, to knee, or above, to the root leg, from here you will go down on one side of the foot, to the fingers, where to climb and on the back, to the desired location (knee or foot root), then down the front side arrears.

Those maneuvers will be performed several times in a row for 3-4 minutes, until a pleasant feeling of warmth and redness. Cold afuziuni is indicated for people with early varicose veins, with paresis or paralysis of limbs, insomnia, sequelae after phlebitis, chronic edema and those who blame heavy legs and tired.

The cataplasms consist of applying substances, usually wet, on the skin. Most common are mustard cataplasms, with horseradish, chamomile, mud etc.. They are used today (mustard), especially in children, acute inflammatory processes, for their effect revulsive, decongestant, analgesic and antispasmodic (pneumonia, congestion, periviscerite, myalgia, neuralgia, etc.). Their action is explained both by the thermal factor, and by the chemical (volatile essences).

The showers are procedures well known and used. They are cold, warmer baths, special and alternate, or after the water jet as "the wheel", "fed" or "in range" (shower gardener). Indications showers, after temperature, be confused with those of cold compresses warmer baths, and the alternate, as friction, have a stimulant, tonic.

Among these, Scottish shower is a shower "fed", alternating with a pressure of 1-2 atmospheres, the water jet at a distance of 5-6 m from the subject. To effect stimulant, tonic, is shown in chronic rheumatic diseases, sciatic chronic neurosis, obesity, hypothyroidism etc.
Figura 5. Showers

Between the special showers, shower-massage shower mention underwater shower. Shower massage, by name, is a warm shower, with 5-6 rosettes, to which is added massage. It has a massage absorbed, as indicated in a number of chronic rheumatic processes, enurologice (arthritis, arthrosis, spondylosis, sciatica, obesity etc.).

Underwater shower is a shower "fed" with pressure 2 to 3 atmospheres, designed under water 10 to 15 cm of skin. There are special facilities in this respect. Effect and indications are similar to those of shower-massage, only support is better.

The shower with warm air done with hairdryer, usually accompanied by massage. Has the same indications and actions as shower-massage, only it's a gentler procedure. Showers Contraindications: avoid pressure showers (Scottish) in: vascular fragility, in psychosis, agitation, pregnant women, in fever etc.

Hydrotherapy is contraindicated for persons who have:
- severe organic deficiency;
- severe brain impairment;
- senile deterioration;
- diabetes;
- people with multiple sclerosis;
- to persons suffering from cardiovascular diseases (hypertension, cardiac arrhythmia, cardiac ischemia, stroke, thrombosis, etc..) to avoid certain procedures, especially those using hot water
- pregnant women should avoid hot baths and saunas.

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MODERN CONCEPTS OF RECOVERY and REHABILITATION-CNS AFFECTIONS (MIRROR SYSTEM)

Dr. Delia Cinteză

1Institutul Naţional de Recuperare, Medicina Fizica și Balneoclimatologie

Abstract

The concept of mirror therapy is an interactive phenomenon, studies reveal that identical sets of neurons can be activated in an individual given that it is only a witness in an action performed by another person, sometimes activation of these neurons is the expression of emotions or conduct.

Mirror neurons are a particular class of visual and motor neurons, first discovered in area F5 of the premotor cortex in monkeys. To humans, brain activity they are involved in mirror neurons occurs in the premotor cortex and inferior parietal cortex.

An important functional aspect of mirror neurons is the relationship between the motor and visual properties. All mirror neurons show a congruence between actions that respond to visual and motor responses that encode them.

Two important hypothesis have been issued on the functional role of mirror neurons. The first is that mirror neurons activity mediates imitation, the second sustain that mirror neurons are the basis of action understanding. Mechanism makes it possible mediation by understanding others actions mirror neurons is simple. Every time an individual action taken by someone else noticed, neurons that represent that action are activated in premotor cortex of the observer.

This motor representation of the observed action, which is induced automatically, corresponds to that generated spontaneously during an active action, whose result is known individual. Thus, the mirror system transforms visual information into knowledge.

Structural theories are presented and related to mirror neurons and empathy. Empathy is defined as an emotional or intellectual identification with another person, living it indirectly feelings or ideas. Empathy extends beyond simple understanding of the emotional state of a person through to the other living feel. A fundamental concept is that the similarity in the mirror mechanism is activated closely with a stimulus or more from outside. The catalyst may be observing motor actions and facial expressions such as disgust, joy or fear.

In conclusion, we believe that this class of specialized cells of the brain is located in parts of its responsiveness to sensory and motor stimuli (visual, olfactory, auditory, tactile).

Using functional MRI to study the influence of different scents on the brain, a team of researchers exposed a subject to three types of olfactory stimuli: bad, pleasant and neutral, in order to obtain a sense of disgust, pleasure or a neutral reaction.

![Figure 1. The mirror neurons system of the brain](http://news.softpedia.com)

Meanwhile, a functional MRI was done a second topic, which only reactions observed in subjects exposed to facial stimuli. Both the in the case of odor, and of the nice (but not the neutral), researchers reported that both the amygdala (associated with emotions) and island (a structure has extensive connections with the amygdala and other somatosensory areas ) observer were enabled. The result sustain role of mirror neurons in human relationships.

Since activation of mirror neurons is dependent on empathetic identification with others, a researcher lead further the idea and distinguish two types of identity: **individual** and **social**. Social identity is a capacity based on neurobiology for empathy and understanding the of others, evolving from the first interactions with others. Thus, there is a connection between
intersubjectivity and empathy, inter subjectivity is defined as the embodiment of empathic processes between an individual and another, when notice an act or expression of feelings. Are considered precursors of empathy: printing, attachment and synchronization. Printing is a pattern of behavior transmitted by biological automatically creates a receptivity to certain stimuli (e.g. from mother to child). A This mechanism allows the recognition and attachment to members of the same species. To humans is considered to be the basis social and emotional attachment that has a newborn from the one who caregivers. At a level neuro-anatomical, visual stimuli and affective are transmitted through brain connections into the right hemisphere, between temporal anterior lobe and orbital frontal cortex (located behind the eye), an area associated with the central view.

By visual stimulation that comes from interaction of parties supported through mutual eye contact, mirror system print specific areas of the brain child, promoting and facilitating neurobiological development, an increase of dendritic connections in areas that form behavioral types. Dopamine has been identified as the main neurotransmitter that activated the neural interface. Active participation in the mirror system is considered essential for normal attachment training scheme.

Synchronization, even if is often unconscious, start printing and is dependent on familiarity, recognition and knowledge, being a prototype of preverbal communication. Thus, synchronization sets the hidden intersubjectivity and social knowledge.

As dance-movement therapy, the therapy in mirror may have one or more forms, exercised through movement, facial expression or voice. Stand on the basis of dynamic interactions, neurons in networks with similarity in the mirror, within the central nervous system starts actively. In theory, sets neurons from the central nervous system are augmented by therapist when they move in sync with the patient or therapist observe the patient only when moving. In the latter mode, the network generates active mirror neurons, in fact, interneurons connectivity between two individuals.

To see the involvement of mirror neurons and empathy in dance-movement therapy, were offered two examples: a project supported by the dance choreographer Bill T. Jones and a survey on dance-movement therapy done by a student with the title: "What Muslim women feel their bodies in dance-movement therapy? ". Jones dance started from to some original gestures, which participants served as a basis, these amplifying them or changing them. The second study to preserve the integrity of primary or original movements.

Even if they were different, the two projects have depended on the interaction phenomenon and undoubtedly related to the structure of mirror neurons, which depend on intersubjectivity, synchronization and empathic relationship. Mirror therapy has had positive effects in various diseases, such as phantom limb pain, AVC, and complex regional pain syndrome after surgery on the hand.

Phantom limb pain occurs in 90% of amputations, this type of pain can be produced by a conflict between visual feedback and proprioceptive representation of the amputated limb. Mirror therapy has been used with some success in patients with limb impairment. Under direct observation, patients were performed for 15 minutes daily therapy. Pain intensity decreased by treatment in the mirror, as the number and duration of pain episodes, 100% of patients. The results were different from those obtained in control groups, such as covered mirror group, where only 17% reported improvement in pain, and 50% worsened and mental visualization group, where 33% reported a decrease pain and 67% a worsening.

Reduction of pain that is associated with mirror therapy, may occur due to activation of mirror neurons in the cerebral hemisphere contralateral to the affected limb. Clinical studies have shown that mirror therapy may be used to improve recovery after AVC. In one study, to examine brain activity during unilateral movement 5 handed healthy subjects with or without reflection in the mirror to see the hand
movement. The results suggest that mirror therapy is most effective when used for motion dominant right hand, this phenomenon can be related to different handling of the non-dominant hand and dominant. Some neuro-physiological mechanisms basic to explain these reactions mirror therapy are still unclear.

One hypothesis is that mirror therapy improves cerebral blood flow in cortical areas designated to represent the mirror neuron system, this method is more efficient than the unaffected hand movement observation. The study was conducted on four healthy subjects and 3 with middle cerebral artery AVC, both groups received a functional MRI while executing a series of moves. Results showed that using mirror therapy technique, there was a significant increase in cerebral blood flow in the premotor cortex above. These studies provide neurophysiological evidence that cortical areas designated to represent the mirror neuron system is engaged during mirror therapy in AVC patients.

Ekmann said that people show common reactions those that match the better. People are neurologically equipped with the ability to feel, to know and to understand each other. Capacity and level of experience consists empathic responses that influence the definition of personal and social identity, closely linked with its vision of the world. Empathic reflection is considered part of the therapeutic process. Identification of intersubjectivity can be seen as an empathetic projection, a phenomenon of great importance psychotherapy that meet exchange problems that guide the therapist-patient relationship.

References:
A. Historical data

Pucioasa resort is located in Wallachia Subcarpathians Ialomita on Ialomita river valley, a region of hills, about 21 km from Targoviste, altitude ranging from 390 to 450 m. City was formed around 1760 by merging settlements Serbanesti (documented in 26 September 1538) with Podurile de Jos and Podurile de Sus (documentary mentioned in 1461) and Zărăfoaia village. In 1791, the area shown on a Austrian map and in Russian one in 1835. After 1828, developed as a resort balneoclimatic, taking the name Pucioasa because of concentrated sulfuric mineral waters from here, called popular brimstone. Main economic industry is tourism balneary town having a balneoclimatic resort status. The main hotels are "Ceres" and "Tourist".

B. General characteristics

The climate is continental of hills, moderate without thermal excess. The average annual temperature is 9.5 °C, the coldest month being January (average monthly multi -3 °C) and July the warmest month (average normal of 19.5 °C). Annual average cloudiness is 5 tenths, the average annual number of days with clear sky is 70, and the overcast day with 90.
The duration of bright sunshine totals annually, on average, a total of 2100 hours. Average annual precipitation is 700 mm, the average number of rainy days is 115, and the days with snow cover of 60.

C. Natural therapeutic factors
The physical, chemical composition, microbiology, stability and human health effects were monitored by INRMFB. Last measurements were made in 2011.

Minerals water for external cure administration:
- Well 1: sulfur mineral water, sulfate, chloride, calcium, sodium, hypotonic
- Drilling 9: sulfur mineral water, concentrated, iodine, chlorine, sodium, hypertonic
- F 10: concentrated mineral water, iodine, chlorine, sodium, hypertonic
- F 11: mineral sulfur, iodine, chlorine, sodium, hypertonic

Bioclimate sparing sedative. Average number of days with thermal comfort in July, is 12 noon, and the days of discomfort by heating 9.

The skin bioclimatic stress index annual average amounts to 12, April-June, September and October relaxing.

The lung bioclimatic stress index is 30 months the balance was in April, October and November. Bioclimatic stress index average annual total recorded value of 42, indicating a sedative bioclimate, the unmitigated.

D. Medical and balneary treatment facilities
The resort is equipped with balneary medical treatment facilities and medical personnel to ensure the natural treatment factors for therapeutic purposes. INRMFB evaluated and monitored basis balneary treatment operating based on the authorization issued by the Ministry of Health.

Sulfur springs have a high concentration (1.152mg / l), sulfate, chloride, low bicarbonate, calcium, sodium, magnesium. The climate of the hill, with average annual temperature above 10 degrees Celsius and annual rainfall of 750mm, and the existence of mineral makes of the resort to be recommended for the treatment of rheumatic disorders, posttraumatic, neurological, peripheral and central respiratory, dermatological and cardiovascular –vascular.

Existing treatment equipment in the medical balneary treatment bases:
- warm bath with mineral water in bathtubs and basins;
- herbal baths in bathtub;
- paraffin packing;
- inhalations and aerosols with sulphurous water;
- electrotherapy currents low, medium and high frequency;
- underwater shower, galvanic baths;
- thermotherapy;
- segmental massage, regional and reflex;
- individual physical therapy, with manipulation for peripheral joints, joint and spinal traction.

Therapeutic Indications:
Therapeutic indications have been set by committee of the INRMFB for each source of natural therapeutic factor in the analyzes and studies conducted.

The main indications
Musculoskeletal disorders:
- rheumatic diseases: spondylitis, gonarthrosis, coxarthrosis etc.
- abarticulare rheumatism;
- posttraumatic disorders of musculoskeletal system.

Secondary indications
- respiratory and ORL diseases
- nutritional and metabolic diseases associated
- cardiovascular diseases
- dermatological diseases
- peripheral and central neurological diseases

Note: indications of reference are set by the practitioner RMFB. Application is not allowed in patients who have general contraindications (see below) or specific contraindications, established by the practitioner.
THERAPEUTIC PROFILE: Diseases of the musculoskeletal system

General contraindications

- febrile acute and chronic conditions in periods of acute exacerbation;
- venereal diseases in the contagious period (syphilis, gonorrhea);
- wearers of pathogens (hemolytic streptococcus, HB Ag, HIV);
- infectious diseases in the period of infectivity, until the end of compulsory isolation;
- cachectic states from any cause which produced them;
- malignant tumors (regardless of form, location or evolutionary stage) or benign tumors with malignant potential;
- repeated and heavy bleeding of any kind;
- pathological pregnancy and normal pregnancy in any month over 3 months;
- epilepsy
- blood disease or impaired general health system (anemia, leukemia, lymphoma);
- wearers of germs or parasites;
- psychopathy with social behavior disorders;
- demente;
- neuropsychiatric disorders, and chronic alcoholism;
- drug addiction
- patients at risk of organ decompensation (diabetes harder to control food and medicine);
- potentially contagious dermatological disease or large lesions, unsightly;
- heart failure, kidney or liver show;
- patients with failure of self (they will be sent only in special nursing homes);

Types of possible balneary cure (already applied or can be developed in future):

- health cures: comfort, fitness, antistress, active preventive cure of diseases by type / types of risk factors for diseases listed above, anti-aging diets, weight reduction cures, cures for osteoporosis prevention;
- cures of secondary prophylaxis;
- therapeutic cures;
- cures of medical rehabilitation of the second and third phase.

E. The development potential in terms of natural therapeutic factor

Sulfur springs were discovered in Pucioasa town, which have been exploited since the XIX the century. Due to unique cure factors as sulphurous waters, considered to be the largest concentration in the country, the resort has developed profile in the external cure rheumatism, inflammatory, degenerative, abarticulare, etc. limb postrumatic sequelae. Taking into account: the type and characteristics factors cure, cure number of factors, indications of cure, natural cure factors reservations, resort development potential is high.
Editing regulations

(peer-review protocol)

The manuscripts will be submitted as attachment to the email in Word format (to culturi@gmail.com). Photo processing, scanning, graph processing –if needed-are the responsibility of the editing team. Language of papers is English. Articles can be published with translation into Romanian.

After manuscript receipt, the corresponding author will receive a short e-mail confirming the receipt, which will contain the registration number, the date the manuscript was received and the fact that the manuscript was handed out to the Editorial Board. The Journal Editor chooses 2 peer-reviewers (from the Editorial and Peer-review Board) and sends them by e-mail the manuscript.

The reviewers' decision (approval with no changes, approval with major/minor changes, rejection) will be immediately communicated by e-mail to the corresponding author by the editor.

If the manuscript gets approval with changes, the corresponding author shall send the improved manuscript within 4 weeks. The editor will convey the corresponding author's answer to the peer reviewers. If they are satisfied with the corresponding author's answer, they will send the subject editor the decision of approval for publication of the improved manuscript.

If the peer reviewers consider that the corresponding author did not meet/or met poorly the revision requests, they will deny the approval for publication, which will be communicated to the editor.

The approval for publication once taken by the reviewers, the decision will be communicated in editorial meeting.