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Research Announcements “Heritage BG” is e serial, published by the “Heritage BG” centre of Excellence, whose leading institution is Sofia University “St. Kliment Ohridski”. It is published twice a year and distributed to all partner institutions of the Centre. It is published as an open-access journal https://periodicals.uni-sofia.bg/index.php/AR-NBg/en

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Корица IV: Вила „Армира“ – спалня на собствениците
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Център за върхови постижения „Наследство БГ“
Centre of Excellence “Heritage BG“
НАУЧНИ ИЗВЕСТИЯ „НАСЛЕДСТВО БГ“
RESEARCH ANNOUNCEMENTS “HERITAGE BG“
Рецензирано издание в два броя годишно
Peer-reviewed periodical in two issues per year
Година VI, брой 10 / Year VI, issue 10^{h}
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Научни известия „Наследство БГ“
Година V, брой 10, 2026

Research Announcements “Heritage BG“
Year V, Issue 10th, 2026

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София 1000, ул. „Ген. Йосиф В. Гурко" № 7, 2026
yearbook@nasledstvo.bg

Publisher
© Association Centre for Excellence "Heritage BG"
Sofia 1000, 7 General Iosif V. Gurko Street, 2026
yearbook@nasledstvo.bg

ISSN 2815-3138 (Print)
ISSN 2815-3316 (Online)
DOI: https://doi.org/10.58894/AR-HBg.2026.10

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Hot Stone Massage – A Traditional and Innovative Medical-Wellness Practice

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DOI: https://doi.org/10.58894/AR-HBg.2026.10.96-103

Abstract: *The natural power of volcanic stones has been known for centuries. Passed down through various cultural traditions, Hot Stone Massage has been preserved to this day thanks to its effectiveness as a means of recreation, prevention, and treatment. Its positive effects have been confirmed by numerous scientific studies. It is no coincidence that volcanic stone massage is one of the most sought-after relaxation and recovery procedures in the practice of the most modern Medical Spa, Spa, and Wellness centres. An analysis has been conducted of the Wellness innovations in the offering of the traditional Hot Stone Massage technique, as presented in the digital platforms of 50 Medical Spa, 121 Spa, and 40 Wellness centres currently listed in the Bulgaria' National Tourist Register. A trend toward development and enrichment of the traditional technique with elements of aromatherapy and reflexology massage has been identified.*

Keywords: *thermotherapy; manual therapies; certified SPA and Wellness centers*

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INTEGRATIVE WELLNESS CONCEPT BASED ON GEO-THERMAL THERAPY[1]

(geo=stone, thermal=heat and less heat/ cold) and natural heritage

Throughout the process of society's historical development, a number of rituals, natural healing practices, forms of knowledge and lifestyles have been preserved, forming the natural heritage of material and immaterial values. A holistic approach to human health in all its dimensions (physical, mental and social) forms the basis of modern wellness (Dimitrova and Tomova, 2025 ; Dimitrova, 2024 ; Dimitrova and Nesheva, 2021 ; Nesheva 2022). A significant proportion of today's wellness practices originate from traditional healing and restorative methods used in the past, which demonstrates the con-

[1] ChatGPT is used for English grammar revision and translation.



Picture 1. Stone Park

nection and continuity between historically established practices and modern models of healthy lifestyle. The use of thermotherapeutic factors (exogenous heat/cold via heated environments) has deep historical roots and is one of the earliest forms of natural healing known to humankind. As far back as ancient times, people discovered the healing properties of hot stone therapy, which was used for prevention, recovery, relaxation and the treatment of various diseases. This makes **Geo-thermal therapy** an essential part of the cultural and health heritage of many civilisations. Volcanic stone massage, also known as stone therapy, has ancient roots, dating back thousands of years and spreading across numerous cultures around the world: Ancient Mesopotamia, Japan, India and China. Native Americans believed that stones are an interaction of the four elements: born of the earth, they absorb the energy of the sun, water and wind. Native Americans have used heated stones to relieve menstrual pain in women. Passed down through various cultural traditions, Hot Stone Massage has been preserved to this day thanks to its effectiveness.

FROM „LA STONE THERAPY" TO „STONE DANCING™"

In 1993, the American massage therapist Mary Nelson (Tucson, Arizona) revives this ancient method by developing her own style of massage, also known as La Stone Therapy, which requires specialized training and certification. Over the next 18 years, Mary and a team of 63 key instructors, based in 11 different countries, trained over 30,000 students in the art of La Stone Therapy. She and seven key instructors continued to refine the La Stone Therapy process into 27 different modalities, which evolved into various body therapies such as: deep-tissue massage, sports massage, reflexology, shiatsu, prenatal massage, SPA treatments, facial techniques and others. In 2014, Mary developed seven new courses based on her personal stone dance, which is her passion and forms the basis of the energy work and sound therapy in her stone sessions. In 2016, Stone Dancing™ was certified as a service by the NCBTMB (National Certification Board for Therapeutic Massage & Bodywork). The American woman patented this unique massage, but subsequently every SPA center has come to offer its own version of the treatment. Clients should bear in mind, however, that volcanic stone massage requires special skills and therapist certification.

In the territory of today's Bulgaria, Master Petar Danov in his lectures speaks about the healing power of stones warmed by the sun, as he recommends spending 1 – 2 hours on such stones to recharge with solar energy for health and beauty (Danov, 2004).

Types of stones suitable for therapy Basalt stones (Basalt Stones): the most commonly used type for hot stone massage; of volcanic origin, with a smooth surface and a high iron content, enabling them to retain heat for a long period, achieving deep muscle relaxation, pain relief and stress reduction.

Marble stones (Marble stones): used for cold therapy (contrast therapy), to reduce inflammation and swelling and to soothe the

skin; they are often applied on the face or used after hot stones to tighten blood vessels.

Jade stones (Jade stones): for balancing energy, detoxification and relaxation, although they retain heat for a shorter time than basalt.

Himalayan Salt Stones (Himalayan Salt Stones): handcrafted from natural salt sources, naturally antimicrobial and rich in minerals, they nourish the skin and are excellent for exfoliation, reducing inflammation and promoting relaxation (due to their composition, they may feel rougher on sensitive skin).

River stones (River stones): sourced from riverbeds and naturally smoothed by the water over time, they retain heat well and are used in traditional hot stone massage techniques for their grounding effect (their varying porosity can make them difficult to clean and lead to uneven absorption of massage oils).



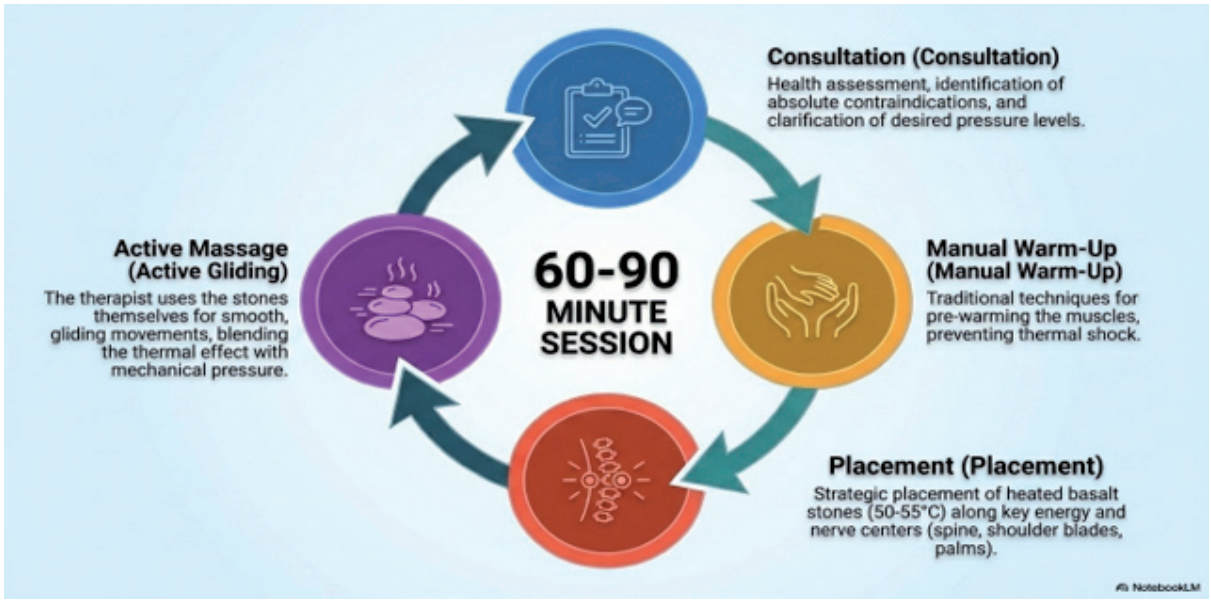
Picture 2. Volcanic massage stones



Picture 3. Professional heater for volcanic stones

HOT STONE MASSAGE TECHNIQUE

To achieve the best results and ensure safety, it is recommended that the stones are selected according to the client's specific needs and the type of treatment. It is essential that they are smooth, free from defects and professionally disinfected after each use in order to avoid the risk of infection or injury.



Picture 4. Hot Stone Massage treatment

PHYSIOLOGICAL IMPACT

The physiological effects of Hot Stone Massage are defined by the combined action of two main factors: ***thermal and mechanical.***

Thermal factor: It has been scientifically proven that the application of heat (usually between 50 and 55 degrees Celsius) causes the blood vessels to expand ***(vasodilation).*** This increases local blood flow, delivers more oxygen and nutrients to the tissues, and accelerates the elimination of metabolic waste products. Furthermore, the heats help to soften the connective tissue and ***reduces muscle spasms and stiffness at a tissue level***. In addition, heat stimulates receptors in the skin that can block pain signals travelling to the brain ***(pain modulation)***, which is particularly beneficial in conditions such as arthritis and fibromyalgia. Cold caused vasoconstriction, reduces swelling in cases of acute inflammation, slows the rate of nerve conductivity (analgesic effect), and reduces muscle contractility (reduces spasms). The sequential alternation of heat and cold treatments provides an opportunity for vascular exercise, improves muscle tone and thermoregulation, and has a hardening and immune-stimulating effect

Mechanical factor: It is well known that massage lowers cortisol level and raises endorphin levels, which explains its physiological action and its effects on pain and stress; in cases of depression, it has a therapeutic effects by raising serotonin levels. Massage stimulates a series of local biochemical reactions in the body which increase neuronal activity in the spinal cord and subcortical nucleus, which in turn affects the perception of pain and fatigue (Weerapong, Hume and Kolt, 2005).

ADVANTAGES OF HOT STONE MASSAGE OVER DEEP TISSUE MASSAGE

Deep-tissue massage focuses on relieving chronic muscle tension and pain, and on recovery from injuries. It involves applying firm, slow pressure, which feels more intense and slightly uncomfortable.

Hot stone massage focuses primarily on improving blood circulation and achieving deep relaxation, with the aim of reducing stress and anxiety and improving sleep. The gentle pressure from the heated stones creates a pleasant, soothing sensation, making it a popular choice as an anti-stress and relaxation treatment.

After both types of massage, it is advisable to rest and drink plenty of water to aid detoxification and cellular hydration.

Stone massage, as a relaxing treatment, combines the benefits of a relaxing massage, aromatherapy, thermotherapy and acupressure. Modern Hot Stone Massage is a treatment that perfectly complements physiotherapy, which aims to restore damaged organs. It is also used in wellness clinics, where it accelerates the body's recovery processed and therefore increases the body's abilities to cope with physical activities. It is important to note that there are several types of hot stone massage: ***dynamic massage, contrasting static and dynamic massage*** (several variations) and ***static (energy) massage***. More often, clients are also enjoying foot and facial massages (Radziejowski, 2018).



Picture 5. Stone massage



Picture 6. Deep-tissue massage

SCIENTIFIC STUDIES PROVING THE EFFECTIVENESS OF HOT STONE MASSAGE

Scientific studies, specifically focusing on hot stone massage, are still relatively limited, but the existing data confirm its therapeutic benefits, both through direct studies and through studies on the effects of thermotherapy and massage in general.

A retrospective analysis of published articles on the effects of heat and massage on pain, stress, depression and muscle tension shows that **Hot Stone Massage** has a positive effect on musculoskeletal pain, fibromyalgia pain and degenerative rheumatism. Side effects may occur if the heat is too high and causes burns, a drop in blood pressure and dehydration (Ramova, 2021).

A randomised controlled study proves that hot stone therapy significantly ***improves sleep quality*** (*Pittsburgh Sleep Quality Index*) in patients undergoing maintenance haemodialysis (Ghavami, Shamsi, Abdollahpoor, Radfar and Khalkhali, 2019). Studies show that heat stimulates the thermoreceptors in the skin, which in turn activate the parasympathetic nervous system. This leads to the release of endorphins (known as 'happiness hormones'), which reduce levels of stress and anxiety. Another randomised controlled study on at least 99 patients who had undergone orthopaedic surgery and were hospitalised in hospitals in Mashhad, Iran, from 2023 to 2024, showed a statistically significant ***reduction in anxiety*** in the pre- and post-operative periods following the application of slow back massage and hot stone massage therapy (*Spielberger Anxiety Inventory*) (Hojat, Aemmi and Esmaily, 2025). This leads the authors to conclude that these massage therapies may be incorporated as an effective complementary and alternative care for reducing postoperative anxiety. Evidence shows that high levels of anxiety can activate the hypothalamic-pituitary-adrenal axis, activate the sympathetic nervous system and influence the regulation of inflammatory factors, along with circulating glucocorticoid hormones. These changes in the nervous and immune systems may lead to tachycardia and hypertension.

Alternative treatment methods, as a non-pharmacological means of relieving the symptoms of certain conditions and improving quality of life, are supported by the World Health Organisation. However, in order to be accepted by conventional medicine, a method must prove its effectiveness through measurable parameters. The WHO recognises the growing role of traditional medicine worldwide and the need to integrate it into health systems on the basis of scientific evidence. At the 78th session of the World Health Assembly (19–27 May 2025 in Geneva), the Global Strategy on Traditional Medicine 2025–2034 was adopted, setting out guiding principles and four objectives: strengthening evidence-based data, ensuring safety and regulation, integrating traditional, complementary and integrative medicine (TCIM) into health systems, and optimising its cross-sectoral value.

Passed down through various cultural traditions, the Hot Stone Massage has been preserved to this day thanks to its effectiveness. Its positive effects on health and wellbeing make it a favored treatment in the most modern SPAs and Wellness centers around the world.

What role does this geothermal therapy technique – however untraditional it may be for the country – play in Bulgarian medical SPA and Wellness programs focused on recovery and relaxation?

DIGITAL PRESENTATION OF HOT STONE MASSAGE[2]

1. Purpose

To examine and analyze the offering of Hot Stone Massage as a traditional and innovative Medical-Wellness practice, as presented in the digital applications of Medical SPAs, SPAs and Wellness centers listed in the National Tourist Register, as an opportunity to improve health and quality of lifestyle.

Subject: The digital applications of the 50 Medical-Spa, 121 Spa and 40 Wellness Centers listed in the National Tourist Register.

[2] Declarations of informed consent have been signed regarding the publication of survey data.

2 Results and analysis

From the information provided in the digital applications of the certified and currently operating (2026) Medical SPAs, SPAs and Wellness centers in the country regarding the offering of hot stone massage, it has been concluded that:

1. A leading role in integrating this service into the complex therapeutic program is reported in the digitally presented Medical SPA centers – 54%.

2. In 37.19% of SPA centers, this therapy is widely implemented as a standard procedure for relaxation and recovery.

3. Among wellness centers, the offering is the weakest — 27.5%, indicating clear potential for growth in the offering of geothermal treatments

4. The average duration of the procedure ranges from 57 – 58 minutes in Wellness and SPA centers to 53 minutes in Medical SPA centers

The analysis of the survey results shows that, despite its ancient origins, the Hot Stone Massage practice is increasingly applied as a method for treatment and recovery within the complex programs of Medical SPA centers (54%), and is widely offered as a relaxation procedure in SPA centers (37.19%). In Wellness centers, the offering is the weakest (27.5%), indicating potential for growth in the offering of this service. (**Fig. 1**).



Figure 1. Offering of hot stone massage in medical spa, spa, and wellness centers in Bulgaria.

The longer average duration of the geothermal Hot Stone Massage procedure offered in SPA and Wellness centers is likely associated with its positioning as a deeply relaxing and anti-stress treatment aimed at prevention and restoring the balance between mind and body in healthy individuals of active age. (**Fig. 2**).

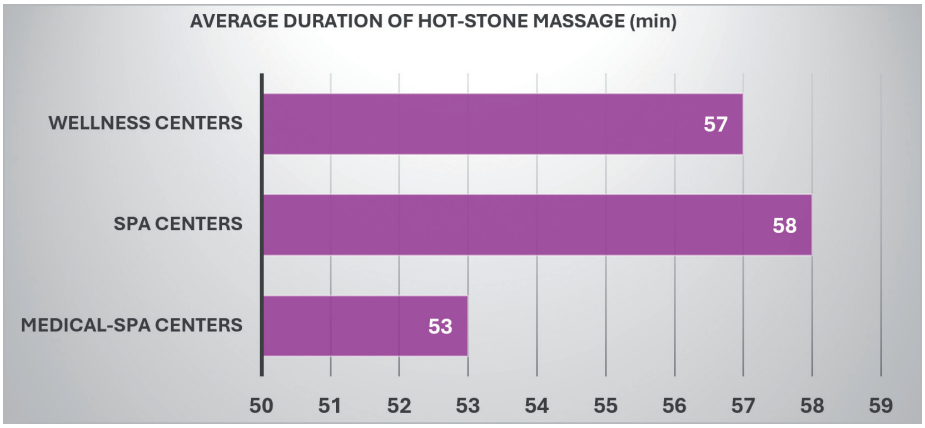


Figure 2. Average duration of hot stone massage in medical spa, spa, and wellness centers in Bulgaria.

In Medical SPA centers, this procedure is more frequently incorporated as part of a complex therapeutic program and is applied not only as a restorative treatment, but also as a therapeutic treatment aimed at reducing pain and fatigue in musculoskeletal disorders, improving joint mobility, relaxing the nervous system in cases of chronic anxiety and insomnia, providing nonspecific stimulation of the immune system, and enhancing the adaptive abilities of the human organism.

It is prescribed following an examination by a specialist in physical and rehabilitation medicine, with strict adherence to the contraindications for thermo-/cryotherapy, such as: blood clotting disorder or use of anticoagulants, skin burns, open wounds, reduced sensory perception, surgery within the past six weeks, fracture or severe osteoporosis, low platelet count (thrombocytopenia), diabetes, pregnancy, infections, and others.

In contrast to Medical SPA centers, where Hot Stone Massage is offered in its traditional form, SPA centers show a tendency toward development and enrichment of this ancient therapy, successfully offering it in combination with aromatherapy and reflexology massage.

3. Discussion

The analysis of the information presented in the digital applications of the certified centers indicates that, despite its ancient origins, the geothermal Hot Stone Massage procedure occupies a significant place in Bulgarian Medical SPA and SPA centers, while it is less frequently offered in Wellness centers.

4. Outcomes

Hot Stone Massage, offered either independently in its classical form or in combination with aromatherapeutic oils, elements of reflexology, and acupressure, represents an effective alternative for recovering from the effects of everyday stress and a valuable opportunity of developing a healthy lifestyle as part of the prevention of socially significant diseases.

5. Recommendations

1. The application of geothermal procedures requires a careful and individualized approach for each client. To rule out contraindications, a preliminary consultation with a specialist in physical and rehabilitation medicine is recommended, particularly in cases where health complaints are already present.

2. For the proper, effective, individualized, and safe application of the Hot Stone Massage procedure, a high level of professional qualification among SPA and Wellness therapy specialists is required, along with strict adherence to hygiene standards.

3. Participation in international educational programs and courses aimed at continuing professional development and specialized scientific training of these professionals is an important component for strengthening the method and integrating it as a significant element of the holistic approach in health care.

4. The existing data of scientific research on the effects of geothermal therapy on clients' physical and emotional well-being requires further expansion and updating through new studies and appropriately selected instruments for objectification and statistical processing of the obtained results.

CONCLUSION

Geothermal therapies are being successfully integrated into medical SPAs, SPAs and Wellness centres in Bulgaria. They are successfully combined with the implementation of other natural products and therapies. An individualised approach, combined with the therapist's high level of qualification, would make spa and wellness therapies incorporating Hot Stone Massage a safe and preferred alternative in the prevention of socially significant diseases.

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Hot stone massage – традиционна и иновативна медикъл-уелнес практика

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Резюме: Естествената сила на вулканичните камъни е известна от векове. Предаван чрез различни културни традиции, масажът с горещи камъни се е запазил и до днес благодарение на своята ефективност като средство за релаксация, профилактика и лечение. Положителните му ефекти са потвърдени от многобройни научни изследвания. Не е случайно, че масажът с вулканични камъни е една от най-търсените процедури за релаксация и възстановяване в практиката на най-модерните медицински спа, спа и уелнес центрове. Извършен е анализ на уелнес иновациите в предлагането на традиционната техника „масаж с горещи камъни", както е представена в дигиталните платформи на 50 медицински спа центъра, 121 спа центъра и 40 уелнес центъра, които понастоящем са вписани в Националния туристически регистър на България. Установена е тенденция към развитие и обогатяване на традиционната техника с елементи от ароматерапия и рефлексологичен масаж.

Ключови думи*:* термотерапия ; мануални въздействия, сертифицирани СПА и Уелнес центрове