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A.M.I.I.T.T.F.

THALASSOTHERAPY

Scientific Research and International Quality Criteria

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DEFINITION

The **therapeutic use**, single or combined, of all the beneficial factors derived from the marine environment, under medical supervision, in dedicated seaside centers. (Fed. Int,Thalass, 1977)

THE FIVE THERAPEUTIC FACTORS CLIMATE , SEA WATER. SEA MUD, SEAWEED, SAND

A chapter of MEDICAL THERMALISM, which it resembles for the similar use of **mineral water**, for the therapeutic strategy, for the general indications and contraindications, and for the use of the same hydrothermal techniques.

The real **DIFFERENCE** from classic thermalism is the opportunity to use other therapeutic means — sand, seaweed and climate — besides mineral water and mud.

SEA WATER

It is the **most complete** mineral **water in nature ,** containing almost all elements present in nature: 92 elements of the Mendeleev table.

It has a constant saline composition, only concentrations vary. “Salinity” is the percentage of dissolved salts per liter

In the Mediterranean and inland seas, salinity is influenced by local factors (evaporation, river inflow, etc.) and ranges from 36 to 39 parts per 1 liter,

from west to east : reaching 40–41 parts per liter in the Red Sea and the Persian Gulf

Ion	Gr. per liter	Percentage
Chlorine Cl--	18.971	55.29
Sulfate So4	2.39	7.69
Carbonate Co3	0.071	0.21
Bromine Br-	0.065	0.19
Sodium Na +	10.497	30.59
Magnesium Mg +	1.278	3.72
Calcium Ca ++	0.411	1.20
Strontium Sr ++	0.411	1.20
Potassium K +	0.379	1.10

trace elements (0.03% of the saline residue): iodine, zinc, bromine, cobalt, selenium...

The METHODS

INTERNAL USE

DRINKING THERAPY

Quinton plasma

INHALATION THERAPY

EXT. USE – ON THE BODY

BALNEOTHERAPY

Cold · hot , with elements · open sea

Individual tub · vascular walk

shower · hydromassage pool

MUD THERAPY

ALGA THERAPY

SAND – PSAMMOTHERAPY

IRRIGATION

Nasal · vaginal

MARINE BIOCLIMATOLOGY

MARINE CLIMATOLOGY

Marine aereosol Heliotherapy · ionizing walk

NOT “ONLY” WATER

QUALITY CRITERIA

01 **Location** on a privileged site by the sea – maximum 1 km from the water-mark

02 Use of **natural sea water**, with certified sea-water quality

03 **Permanent medical supervision** of every treatment pathway

04 A **professional team** of qualified doctors and operators

05 Offer of at least **8 basic thalasso treatments**

06 High levels of **hygiene and safety**



Techirghiol (Romania)

Tombolo Talasso Resort (Italy)



Thalassa Quiberon (France)



INTERNATIONAL LAWS and REGULATION


SERIE GENERALE

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The international ISO standard that regulates thalassotherapy is ISO 17680:2015. :


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Charte pour l'Exercice de l'Activité Thalassothérapi en Tunisie

www.hydrotherapie.tn

www.thermalism

global quality, hygiene, and safety requirements for thalassotherapy centers to ensure customer well-being and authentic, safe use of seawater and marine-based therapies.

EUROPEAN THALASSOTHERAPY from A.I.



THALASSOTHERAPY in the WORLD

«International survey on Thlassotherapy : regulatory frameworks , aviability and practices»

Bonsignori F . Antonelli M. – 2026 – Paper under review

The study aims to collect information on the regulation, availability, organization, and clinical practice of thalassotherapy worldwide ,

The study involved **20 countries** .

Method: research into international literature and distribution of a questionnaire to qualified local Medical Doctors and Researchers

Tier Level	System Type	Countries	Strategic Priorities
Tier 1	**Medically Oriented & Institutionalized** Established traditions, formal regulation, clear clinical role.	**Algeria, Croatia, France, Tunisia**	• Strengthen clinical standards • Promote evidence-based indications • Integrate fully into national healthcare pathways
Tier 2	**Mixed or Transitional** Recognized/regulated, but combines medical treatment with wellness and tourism services.	**Argentina, Bulgaria, China, Germany, Greece, Indonesia, Italy, Romania, Russia, Spain, Türkiye**	• Differentiate medical thalassotherapy from wellness services • Create dedicated regulatory frameworks • Standardize medical supervision requirements
Tier 3	**Predominantly Wellness-Oriented** Specific regulation or formal recognition limited or absent; medical supervision is uncommon.	**Azerbaijan, Brazil, Lithuania, Netherlands, USA**	• Define thalassotherapy within national frameworks • Establish basic quality standards • Define criteria for medical supervision where therapeutic services are provided

THALASSOTHERAPY – FIELD OF ACTION

PREVENTION Primary and tertiary	**CARE** Complementary and sequential therapy
WELLNESS MEDICINE Thermal wellness	**REHABILITATION**

SCIENTIFIC VALIDATION

Thalassotherapy, as a form of thermal herapy, can function as **indipendent treatment** but is also a complementary and sequential therapy:

complementary, because it integrates with other therapies;

sequential, because it is applied according to the stage of the disease.

Acute phase : Pharmacoloic fase

Non Acute Phase : Thalassotheray

MAIN TADITIONAL and INNOVATIVE INDICATIONS

Clinical Field	Specific Indications / Conditions
Articular & Extra-articular Rheumatic Diseases	Osteoarthritis, rheumatoid arthritis, fibromyalgia
Dermatological Diseases	Psoriasis, seborrheic dermatitis, acne
ENT (Ear, Nose & Throat) Conditions	Chronic pharyngolaryngitis
Vascular Diseases	Lower limb lymphatic-venous insufficiency, post-phlebitic syndrome
Psychiatric & Mood Disorders	Mild-to-moderate anxiety and mood disorders, sleep disturbances
Rehabilitation	Neuromotor impairment, post-trauma recovery, cardiac rehabilitation
Post-Cancer Care	Local sequelae, physical recovery & rehabilitation
Aesthetic Medicine	Skin imperfections and pathological cosmetic conditions

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REVIEW PAPER

A narrative review of thalassotherapy and the health benefit of seawater and coastal climates

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Abstract

Thalassotherapy refers to the therapeutic use of controlled exposure to marine environments and their natural elements for health promotion. This review aims to summarize evidence-based clinical applications thalassotherapy. A narrative review was conducted, with PubMed searched in September 2024 for clinical studies evaluating the efficacy of thalassotherapy. Relevant evidence was summarized and critically analyzed. **A total of 566 articles were identified**, of which **16 studies met the inclusion criteria**. Thalassotherapy was primarily studied for its effects on skin disorders, including psoriasis, atopic dermatitis, and vitiligo, as well as rheumatic conditions like fibromyalgia and ankylosing spondylitis. The interventions howed significant improvements in disease severity and patient quality of life, with the strongest evidence seen in psoriasis and fibromyalgia treatment. Thalassotherapy appears beneficial for symptom relief in several conditions, particularly skin and rheumatic disorders. However, further research is needed to quantify its effect size, evaluate long-term benefits, assess potential risks, and identify factors that may influence treatment outcomes.

SCIENTIFIC EVIDENCE : DERMATOLOGY

Psoriasis

Significant reduction in PASI score (Psoriasis Area and Severity Index).

Effects comparable to biologic drugs in some cases, via distinct physiological mechanisms.

Sustained clinical benefits observed for up to ~3 months post-treatment.

Atopic Dermatitis

SCORAD improvement of up to ~87%.

Enhancement and restoration of skin barrier function.

Significant reduction in local inflammation and pruritus.

Vitiligo

81% of patients experience improvement in skin repigmentation.

Low percentage of complete remission achieved.

Effective complementary approach alongside standard light therapy.

Seborrheic dermatitis, Acne: ongoing studies

SCIENTIFIC EVIDENCE : RHEUMATOLOGY

Fibromyalgia

- reduction of pain
- reduction of muscle stiffness
- improvement in mood
- improvement in quality of life

Osteoarthritis

- reduction of joint pain
- increased joint capacity and mobility

Ankylosing Spondylitis

- increased Spinal mobility
- eduction of Disease activity index

Reduction in the frequency and/or intensity of **recurrences**

Reduction in the use of **medication**

Absence of **tachyphylaxis**
Greater drug efficacy upon resumption of pharmacological therapy

MAIN MECHANISMO of ACTION

Action on MYCOBIOTA	Cutaneous,
THERMAL Stimulus	Micro and macro-circulation. THERMAL EQUALIZATION AND INVERSION. Respiratory activity. Modifications . Muscle relaxing
OSMOTIC Mechanism	hypertonic waters
ENDOCRINE Stimulus	ADH, ANF, renin, aldosterone, cortisol, prostaglandins NEUROENDOCRINE: beta-endorphin, serotonin, enkephalins (?)
IMMUNOLOGICAL Stimulus	Modulation of Immunoglobulins IgA, IgG, IgM (?)
Direct CHEMICAL Action	Specific responses, e.g. disinfectant (iodine), disinfectant ad antiinflammatiry (sodium chloride)
Action on FUNCTIONAL DEPARTMENTS	Sweating, diuresis
BASAL METABOLISM Stimulus	By thermal stimulus and specific action of mineralizers

The FUTURE of THALASSOTHERAPY

THE FUTURE IS TODAY

- consolidating tradition
- openness to innovation
- international regulation
- scientific research





International commission composed of Experts appointed by the world organizations in the field of thermal medicine, tasked with creating a charter on thalassotherapy

THANK YOU FOR YOUR TIME
AND ATTENTION