

What clinical research or medical evidence is there for Dry Salt Therapy/Halotherapy?

Salt has been used for its healing and therapeutic qualities for thousands of years from a variety of geographic regions and cultures. In modern times, dry salt therapy, also called Halotherapy, has been observed and researched with recorded studies that go as far back as the early 1800's from physicians and scientists throughout Europe and the Far East. In the past few decades, more recent and current clinical studies have been published showing the efficacy of dry salt therapy and its application to various conditions.

Most of the current research and clinical studies are based in the countries where dry salt therapy has been a health and wellness modality for the past few decades such as Russia, Poland, Finland, Israel, Italy and other geographic locations. These studies have been conducted by licensed medical professionals, clinical researchers, and have been published in various medical journals and publications such as the US National Library of Medicine and the National Institutes of Health.

Some of the current research and published articles focus on how dry salt therapy impacts bronchitis, chronic obstructive lung diseases (COPD), asthmatics, dermatology, and other conditions.

The Salt Therapy Association is also leading the way with supporting additional medical and clinical studies here in the United States and abroad to further the research, development and efficacy of dry salt therapy/halotherapy.

The following are some of the published abstracts of clinical and medical studies conducted with dry salt therapy, halotherapy, dry salt aerosol, etc.

Vopr Kurortol Fizioter Lech Fiz Kult. 1995 Jan-Feb;(1):11-5.

[The use of halotherapy for the rehabilitation of patients with acute bronchitis and a protracted and recurrent course].

Borisenko LV, Chervinskaia AV, Stepanova NG, Luk'ian VS, Goncharova VA, Pokhodzeĭ IV, Krivitskaia VZ, Vishniakova LA, Pokhaznikova MA, Faustova ME, et al.

Abstract

Halotherapy was used for rehabilitation in 25 patients with acute bronchitis of long-standing and recurrent types. The main therapeutic action was ensured by aero dispersed medium saturated with dry highly dispersed sodium chloride aerosol, the required mass concentration being maintained in the range of 1 to 5 mg/m³. Therapy efficacy was controlled through assessment of clinical, functional, immunological and microbiological findings. Metabolic activity values were taken into consideration as well. Positive dynamics of the function indices in the clinical picture resulted from elimination of pathogenic agents, control of slowly running inflammatory lesions and stimulation of some immune system factors. Favourable changes in metabolic activity were present: normalization of serotonin excretion, marked decrease of unbalance in lipid peroxidation-antioxidant system.

PMID: 7785211

[PubMed - indexed for MEDLINE]

Vopr Kurortol Fizioter Lech Fiz Kult. 1997 Jul-Aug;(4):19-21.

[The use of an artificial microclimate chamber in the treatment of patients with chronic obstructive lung diseases].

Chernenkov RA, Chernenkova EA, Zhukov GV.

Abstract

Halotherapy was used for sanatorium rehabilitation in 29 patients with chronic obstructive pulmonary diseases (chronic bronchitis and asthma). Significant positive effects of this method resulted in the improvement of the flow-volume parameters curve of lung function and in hypotensive effects on blood pressure. Halotherapy is recommended for use in patients suffering from chronic obstructive pulmonary diseases with hypertension or coronary heart disease.

PMID: 9424823

[PubMed - indexed for MEDLINE]

Voен Med Zh. 1999 Jun;320(6):34-7, 96.

[Halotherapy in the combined treatment of chronic bronchitis patients].

Maev EZ, Vinogradov NV.

Abstract

Halotherapy proved to be a highly effective method in a complex sanatorium treatment of patients with chronic bronchitis. Its use promotes more rapid liquidation of clinical manifestations of disease, improves indices of vent function of lungs, especially those values that characterize bronchial conduction (volume of forced exhalations per second, index Tiffno), increases tolerance to physical load, normalizes indices of reduced immunity and leads to increasing the effectiveness of patient treatment in sanatorium.

PMID: 10439712

[PubMed - indexed for MEDLINE]

Vopr Kurortol Fizioter Lech Fiz Kult. 2000 Jan-Feb;(1):21-4.

[The scientific validation and outlook for the practical use of halo-aerosol therapy].

Chervinskaia AV.

Abstract

The paper describes a new medical technique--halo-aerosol therapy, the main acting factor of which is dry highly dispersed aerosol of sodium chloride in natural concentration. Halo-aerosol therapy represents a new trend in aerosol medicine. It includes two methods: halotherapy and halo-inhalation. Biophysical and pathophysiological foundations of the new method, how it can be realized are outlined. Clinical reasons are provided for application of halo-aerosol therapy for prevention, treatment and rehabilitation of patients with respiratory diseases. Characteristics and differences of the two halo-aerosol therapy variants are analyzed.

PMID: 11094875

[PubMed - indexed for MEDLINE]

J Aerosol Med. 1995 Fall;8(3):221-32.

Halotherapy for treatment of respiratory diseases.

Chervinskaya AV1, Zilber NA.

Abstract

This work elucidates the questions upon the development of a new drug-free method of a respiratory diseases treatment. Halotherapy (HT)--is mode of treatment in a controlled air medium which simulates a natural salt cave microclimate. The main curative factor is dry sodium chloride aerosol with particles of 2 to 5 mkm in size. Particles density (0.5-9 mg/m³) varies with the type of the disease. Other factors are comfortable temperature- humidity regime, the hypobacterial and allergen-free air environment saturated with aeroions. The effect of HT was evaluated in 124 patients (pts) with various types of respiratory diseases. The control group of 15 pts received placebo. HT course consisted of 10-20 daily procedures of 1 hour. HT resulted in improvements of clinical state in the most of patients. The positive dynamics of flow-volume loop parameters and decrease of bronchial resistance measured by bodyplethysmography were observed. The changes in control group parameters after HT were not statistically significant. The specificity of this method is the low concentration and gradual administration of dry sodium chloride aerosol. Data on healing mechanisms of a specific airdispersive environment of sodium chloride while while treatment the respiratory diseases are discussed.

PMID: 10161255 DOI: [10.1089/jam.1995.8.221](https://doi.org/10.1089/jam.1995.8.221)

[PubMed - indexed for MEDLINE]

Vopr Kurortol Fizioter Lech Fiz Kult. 2000 Nov-Dec;(6):21-4.

[Effectiveness of halotherapy of chronic bronchitis patients].

Abdrakhmanova LM, Farkhutdinov UR, Farkhutdinov RR.

Abstract

The chemoluminescence test in 49 patients with lingering inflammatory chronic bronchitis has revealed inhibition of generation of active oxygen forms in the whole blood, intensification of lipid peroxidation in the serum, depression of local immunity. Administration of halotherapy to the above patients results in correction of disturbances of free-radical oxidation, improves local immunity and clinical course of the disease.

PMID: 11197648

[PubMed - indexed for MEDLINE]

Klin Med (Mosk). 2000;78(12):37-40.

[Effects of halotherapy on free radical oxidation in patients with chronic bronchitis].

Farkhutdinov UR, Abdrakhmanova LM, Farkhutdinov RR.

Abstract

Registration of luminol-dependent chemoluminescence of blood cells and iron-induced chemoluminescence of the serum was used to study generation of active oxygen forms and lipid peroxidation in patients with chronic bronchitis (CB). 49 patients with lingering CB showed inhibition of blood cell function and enhancement of lipid peroxidation. The addition of halotherapy to combined treatment of these patients promoted correction of the disorders and improvement of CB course.

PMID: 11210350

[PubMed - indexed for MEDLINE]

Vopr Kurortol Fizioter Lech Fiz Kult. 2001 Jan-Feb;(1):26-7.

[Efficacy of therapeutic use of ultrasound and sinusoidal modulated currents combed with halotherapy in patient with occupational toxic-dust bronchitis].

Roslaia NA, Likhacheva EI, Shchekoldin PI.

Abstract

Immunological and cardiorespiratory characteristics were studied in 88 alloy industry workers with occupational toxic-dust bronchitis who received the following therapy: sinusoidal modulated currents (SMC), ultrasound (US) on the chest, halotherapy (HT) (52 patients, group 1); SMC + HT (10 patients, group 2); US + HT (15 patients, group 3); HT (11 patients, group 4). The patients did also therapeutic exercise and were massaged (chest). It was found that device physiotherapy (SMC, US) in combination with HT raise the treatment efficacy to 86.5%. This combined treatment is recommended both for treatment and prevention of obstructive syndrome in toxic-dust bronchitis.

PMID: 11530404

[PubMed - indexed for MEDLINE]

Allergy. 2006 May;61(5):605-10.

The effect of salt chamber treatment on bronchial hyperresponsiveness in asthmatics.

Hedman J1, Hugg T, Sandell J, Haahtela T.

Erratum in

Allergy. 2006 Jun;61(6):789.

Abstract

BACKGROUND:

Randomized controlled trials are needed to evaluate the effects of complementary treatments in asthma. This study assessed the effect of salt chamber treatment as an add-on therapy to low to moderate inhaled steroid therapy in asthma patients with bronchial hyper responsiveness (BHR).

METHODS:

After a 2-week baseline period, 32 asthma patients who exhibited BHR in the histamine inhalation challenge were randomized: 17 to 2-week active treatment, during which salt was fed to the room by a salt generator, and 15 to placebo. The salt chamber treatment lasted 40 min and was administered five times a week.

RESULTS:

Median provocative dose causing a decrease of 15% in Fev(1) (PD(15)FEV(1)) [corrected] increased significantly in the active group (P = 0.047) but not in the placebo group. The difference in changes between the active and placebo groups was significant (P = 0.02). Nine patients (56%) in the active group and two patients (17%) in the placebo group exhibited at least one doubling dose decrease in BHR (P = 0.040). Six patients (38%) in the active group and none in the placebo group became non-hyperresponsive (P = 0.017). Neither the peak expiratory flow (PEF) values measured just before and after the treatment, nor FEV(1) values measured before the histamine challenges, changed. The reduction in BHR was not caused by changes in the baseline lung function.

CONCLUSIONS:

Salt chamber treatment reduced bronchial hyperresponsiveness as an add-on therapy in asthmatics with a low to moderate dose of inhaled steroids. The possibility that salt chamber treatment could serve as a complementary therapy to conventional medication cannot be excluded.

PMID: 16629791 DOI: [10.1111/j.1398-9995.2006.01073.x](https://doi.org/10.1111/j.1398-9995.2006.01073.x)

[PubMed - indexed for MEDLINE]



Vopr Kurortol Fizioter Lech Fiz Kult. 2012 Mar-Apr;(2):31-5.

[The use of halotherapy for the health improvement in children at institutions of general education].

Khan MA, Chervinskaia AV, Mikitchenko NA.

Abstract

The objective of the present study was to estimate the influence of halotherapy performed in a specialized salt room on the health status of the children frequently ill with acute respiratory diseases. The application of halotherapy was shown to produce well-apparent antiinflammatory, draining, and sanogenic effects. Observations during 1, 3, 5, and 12 month follow-up periods confirmed the persistence of prophylactic and therapeutic effects of salt therapy. The results of the study were used to develop differential schemes of halotherapy taking into consideration the initial conditions of the children.

PMID: 22908472

[PubMed - indexed for MEDLINE]

Int J Pediatr Otorhinolaryngol. 2013 Nov;77(11):1818-24. doi: 10.1016/j.ijporl.2013.08.013. Epub 2013 Aug 22.

Double-blind placebo-controlled randomized clinical trial on the efficacy of Aerosal in the treatment of sub-obstructive adenotonsillar hypertrophy and related diseases.

Gelardi M1, Iannuzzi L, Greco Miani A, Cazzaniga S, Naldi L, De Luca C, Quaranta N.

Abstract

BACKGROUND:

Adenotonsillar hypertrophy (ATH) is a frequent cause of upper airways obstructive syndromes associated to middle ear and paranasal sinuses disorders, swallowing and voice disorders, sleep quality disorders, and occasionally facial dysmorphisms. ATH treatment is essentially based on a number of medical-surgical aids including nasal irrigation with topical antibiotics and corticosteroids and/or treatment with systemic corticosteroids, immunoregulators, thermal treatments, adenotonsillectomy, etc.

OBJECTIVES:

The aim of the present study is to assess the efficacy of Aerosal halotherapy in the treatment of sub-obstructive adenotonsillar disease and correlated conditions compared to placebo treatment.

METHODS:

A total of 45 patients with sub-obstructive adenotonsillar hypertrophy were randomized to receive either Aerosal halotherapy or placebo for 10 treatment sessions. The main outcome was a reduction greater than or equal to 25% from the baseline of the degree of adenoid and/or tonsillar hypertrophy.

RESULTS:

In the intention-to-treat analysis, a reduction of the degree of adenoid and/or tonsillar hypertrophy $\geq 25\%$ from baseline after 10 therapy sessions was found in 44.4% of the patients in the halotherapy arm and in 22.2% of the patients in the placebo arm ($P=0.204$). Among the secondary outcomes, the reduction of hearing loss after 10 treatment sessions in the halotherapy arm was higher than the placebo arm ($P=0.018$) as well as the time-dependent analysis showed significantly improved peak pressure in the Aerosal group ($P=0.038$). No side effects were reported during the trial. In addition, the therapy was well accepted by the young patients who considered it as a time for play rather than a therapy.

CONCLUSIONS:

Aerosal halotherapy can be considered a viable adjunct, albeit not a replacement, to conventional medical treatment of sub-obstructive adenotonsillar syndrome and related conditions. Further research is however needed to improve ATH treatment.

TRIAL REGISTRATION:

ClinicalTrials.gov [NCT01574885](https://clinicaltrials.gov/ct2/show/study/NCT01574885).

Ann Agric Environ Med. 2014;21(1):124-7.

Salt caves as simulation of natural environment and significance of halotherapy.

Zajac J1, Bojar I2, Helbin J1, Kolarzyk E1, Owoc A3.

Abstract

INTRODUCTION:

Human activity usually leads to a deterioration in air quality; therefore, searching for places that simulate an environment without pollution is important. Artificial salt caves play crucial role, as a kind of therapy, known as halotherapy, based on treatment in a controlled air medium that simulates a natural salt cave microclimate.

OBJECTIVE:

Evaluation of awareness about the existence of salt caves, basic knowledge about the purpose for their presence among people who bought salt caves sessions, and checking their subjective estimation of salt caves influence on their well-being.

MATERIAL & METHODS:

303 inhabitants (18-51-years-old) of 3 randomly chosen cities of southern Poland were surveyed using a validated author's questionnaire. Both genders were represented in comparable numbers.

RESULTS:

It was observed that knowledge about the existence of salt-caves is common - 94% of respondents. 96 persons bought at least 3 salt caves sessions. The majority of women, did this for therapeutic reasons (57%), and men for both therapeutic and relaxation reasons (both 39%). Both among women and men, the dysfunctions intended to be cured by sessions included problems with throat, larynx or sinus. Depression as a reason for buying sessions was mentioned only by women. In general, those who attended felt better after sessions in salt caves.

CONCLUSION:

Besides the health benefits, people do not have free time for rest and activities in clean air; moreover, stress is inseparable from everyday life, and for that reasons salt caves become places that help to support a proper lifestyle.

PMID: 24738510

Halotherapy as asthma treatment in children: A randomized, controlled, prospective pilot study.

Bar-Yoseph R, et al. *Pediatr Pulmonol.* 2016.

Abstract

BACKGROUND AND OBJECTIVES: Asthma is a chronic inflammatory disorder requiring intermittent or continuous anti-inflammatory therapy. Patients often turn to alternative treatments as complements or replacements to conventional treatments. We aimed to evaluate the effect of salt room chambers (halotherapy) on bronchial hyper-responsiveness (BHR), fractional exhaled nitric oxide (FeNO), and quality of life in children with asthma.

PATIENTS AND METHODS: Children aged 5-13 years with a clinical diagnosis of mild asthma not receiving anti-inflammatory therapy. Patients were randomized in this double-blind, controlled study to salt room with halogenerator (treatment group), or without halogenerator (control group). We evaluated the effect of salt room therapy on BHR, FeNO, spirometry, and pediatric asthma quality of life questionnaire (PAQLQ). The treatment period lasted 7 weeks, 14 sessions.

RESULTS: Twenty-nine patients were randomized to the salt room with halogenerator (treatment group), and 26 patients to the salt room without salt halogenerator (control group). A statistically significant improvement in BHR was demonstrated in the treatment group, which remained unchanged in the control group. There was no improvement in spirometry or FeNO levels following treatment. The treatment group showed a statistical improvement in most parameters of quality of life questionnaires.

CONCLUSIONS: Our pilot study suggests that salt room with halogenerator, may have some beneficial effects in mild asthmatic children. Randomized and larger controlled trials with long-term follow-up are necessary.

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