

Halomed®



**From Salt Speleotherapy  
to Controlled Halotherapy and HaloSPA**

**Alina V. Chervinskaya**

From Salt Therapy to Controlled Halotherapy and HaloSPA, 2006.

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## The Beginning of Salt Speleotherapy



Speleotherapy Clinic in Wieliczka, Poland: the first medical institution of this type

About 20 million years ago Eastern Europe was partially covered by a shallow sea. With the disappearance of the sea large amounts of layered salt were left behind. Nowadays they are bedded between 10 and 300 meters below the surface.

In the 14th century people started to mine salt for their own use and trade.

Among the other locations, large salt mines were developed in the South of Poland near Krakow.

1843 the Polish doctor Felix Boczkowski formulated that the presence of the air in the salt mines saturated with dry salt particles caused healing effects on people with pulmonary and respiratory discomforts.

**Salt aerosol plays an important role  
in the relief of respiratory disorders**



Wieliczka, Poland

Speleotherapy as a natural salt treatment has become an effective low-cost alternative for people with respiratory discomforts and skin problems.

Nowadays salt caves are used for treatment in health resorts in Austria, Poland, Slovakia, Romania, Azerbaijan, Kirgizstan, Russia and Ukraine.

The natural presence of dry sodium chloride aerosol in a very clean environment appears to be an important factor of the curing effect. Other factors among which are a comfortable and stable temperature and low humidity contribute to the positive therapeutic value as well as the negative aerosol charge that cleans the air by clustering parts.

In the early 90s of the last century the limited presence of suitable salt mines or salt caves in the world gave a reason to start exploring the possibilities of recreating the micro-climate aboveground.



Kurzentrum Bad Bleiberg, Austria

**Salt Speleotherapy is a method of treating patients by placing them in the environment of a natural rock-salt cavern for a certain period of time**

## Halotherapy Is a Method that Reconstructs Speleotherapy in Surface-based Salt Rooms\*



Salt room made by Halomed



Dry salt aerosol generator for the salt rooms

**Salt environment in the salt rooms is created by aerosol generator with microprocessor control system**

\* The salt room where the treatment session is carried out could be also called "halochamber", "halocomplex", "speleochamber", "salt grotto", "salt cave" etc.

## Halotherapy Solution

Halotherapy is a method that reconstructs speleotherapy by creating identical micro-climate in surface-based salt chambers

Proprietary basic technology of dry sodium chloride aerosol creation with certain characteristics

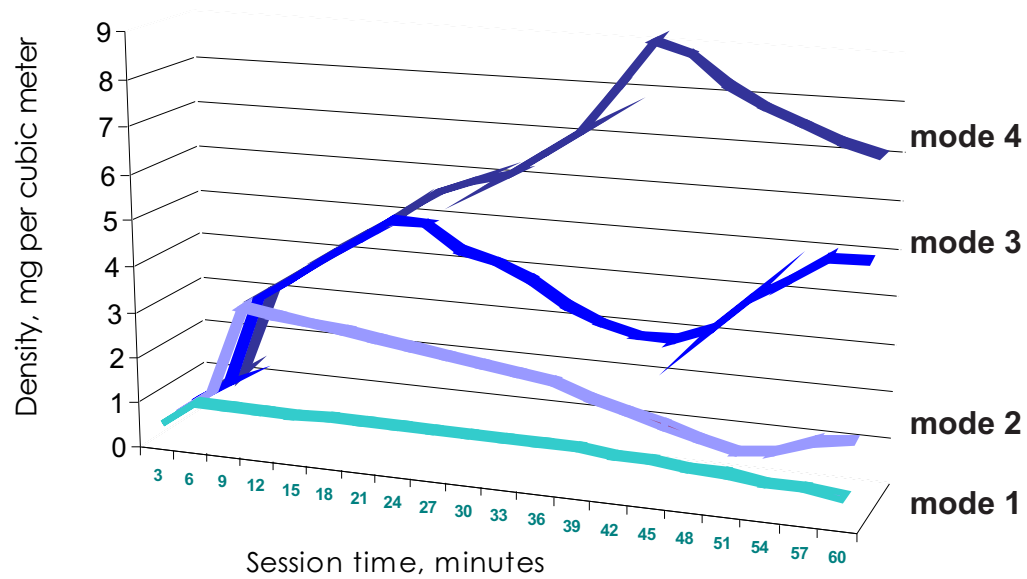
Specific development of physiologic / easy-to-use technologies for targeted respiratory hygiene and rehabilitation, health resort medicine

Dry salt aerosol is combined with comfort conditions of procedure

Capability for wide application



## Halotherapy and HaloSPA in the Salt Rooms

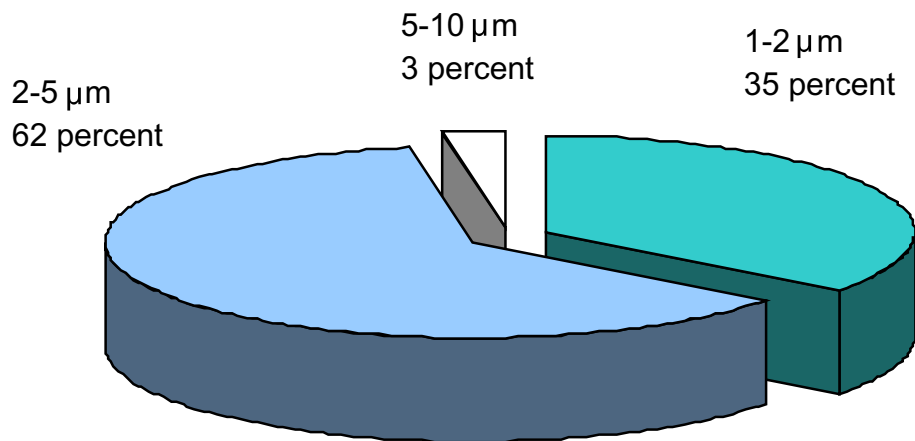


Dynamics of density of dry sodium chloride aerosol in salt room with controlled microclimate at various modes of treatment



Dry salt aerosol generator for the salt rooms

## Characteristics of Dry Sodium Chloride Aerosol at Halotherapy and HaloSPA Technology



**Density range** of dry sodium chloride aerosol (1-10 mg per cubic meter)

**Fractional composition of dry salt aerosol:**

Respirable particles (1-5 μm) – more than 80 percent

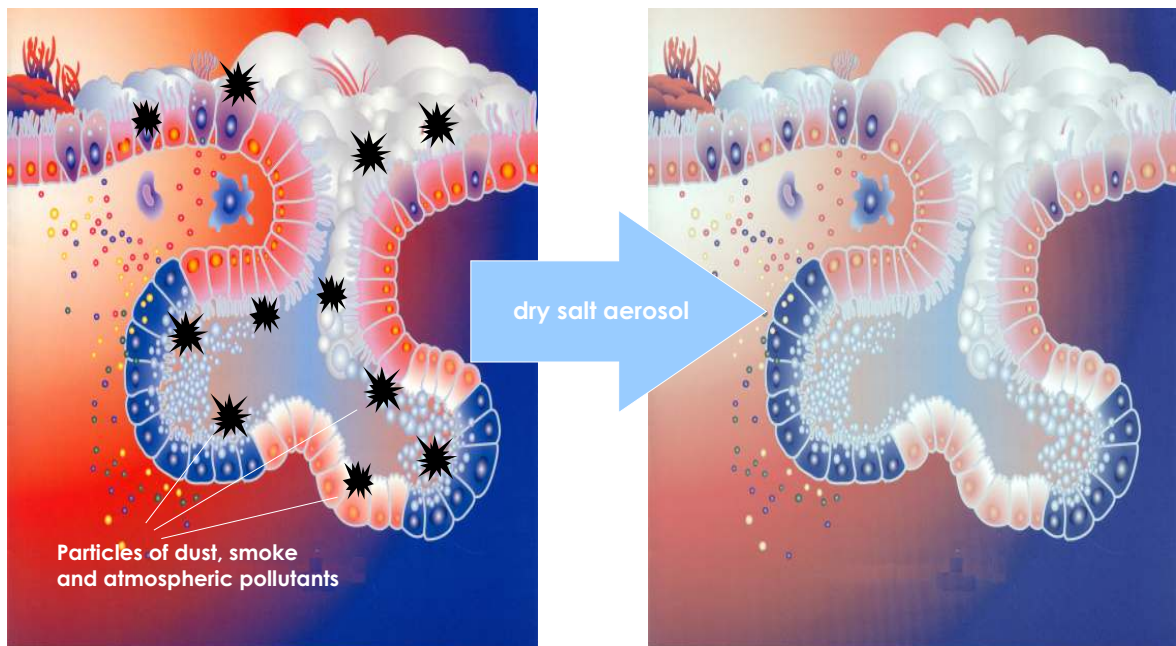
**Negative aerosol charge:**

6-10 nC/m<sup>3</sup>

**Dry salt aerosol produced with the halogenerator contains more than 80 percent respirable particles**



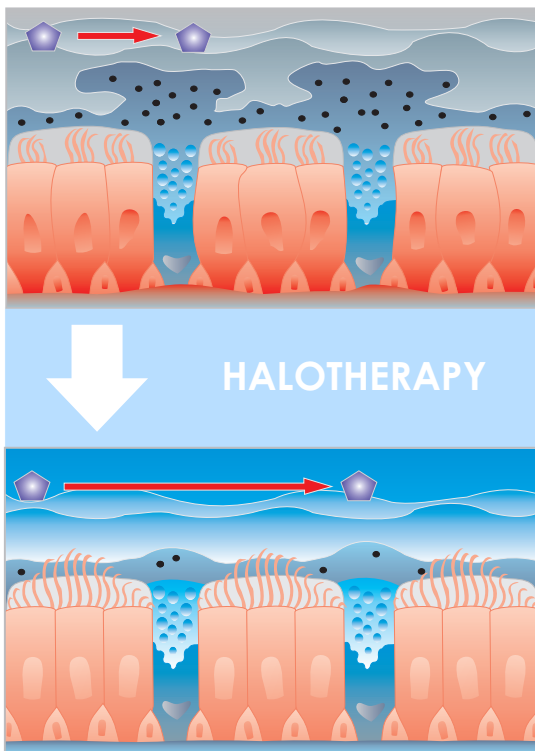
## Dry Salt Aerosol Works as a “Bronchial Brush” for the Airways



Bronchial mucosa before and after halotherapy

**Dry sodium chloride aerosol has cleansing and anti-inflammatory effect on the respiratory system**

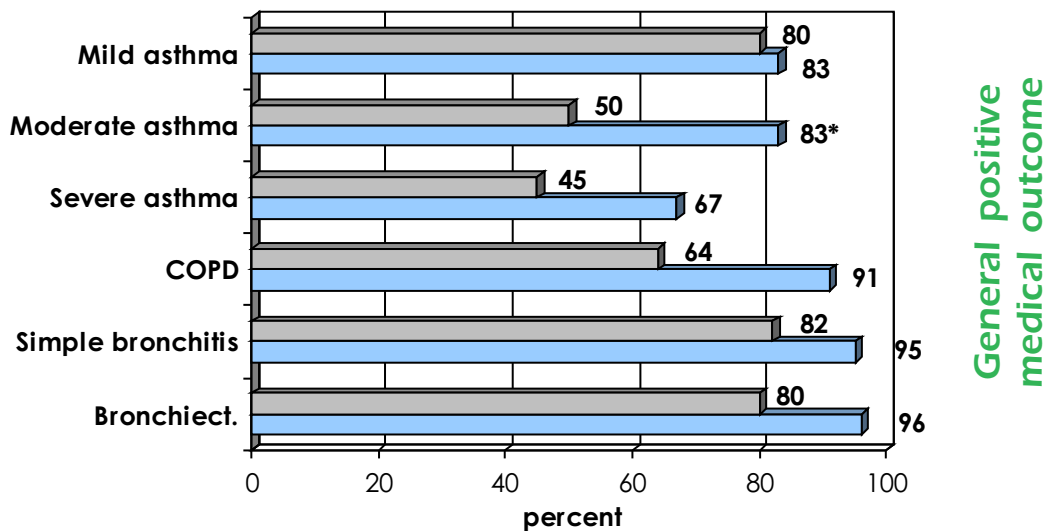
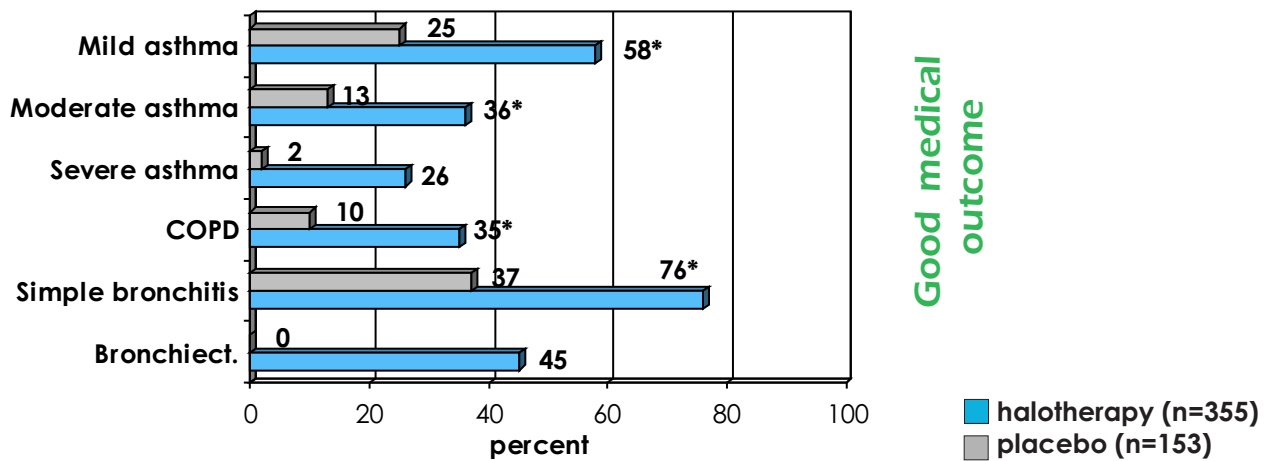
## Dry Sodium Chloride's Mechanisms of Action



Decrease inflammation of the respiratory tract based on increased number of alveolar macrophages in combination with a stimulation of local immune response (IgA etc.), improvement of biocenosis.

- Removal of pathogenic agents
- Speed-up of mucociliary transport
- Abatement of bronchial inflammation

## Halotherapy Efficiency in Patients with Chronic Lung Diseases\* (numeral clinical-functional estimation)



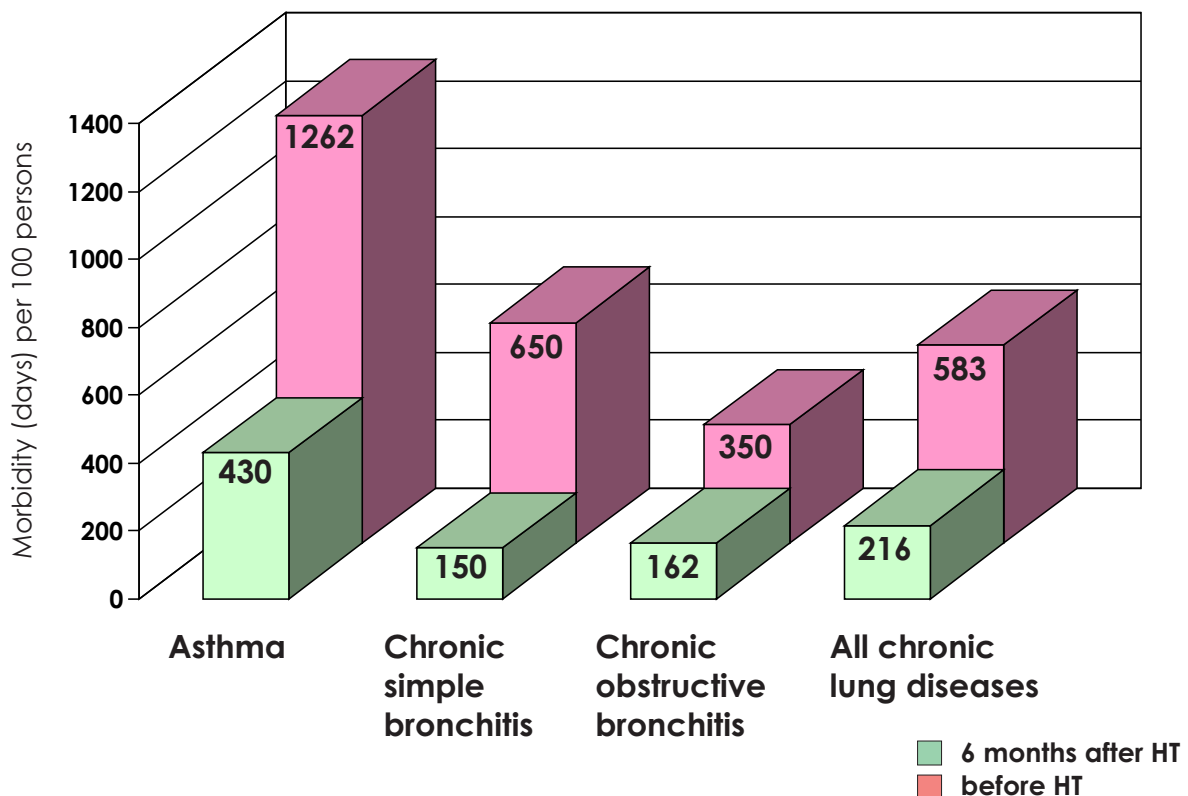
The controlled placebo studies have shown that the inclusion of halotherapy into the rehabilitation course of pulmonary pathology patients allows achieving the maximal therapeutic effect by 82 – 96 percent of patients along with the most optimal use of pharmacotherapy.

By significantly large amount of patients the stronger pronounced positive effect is observed.

**An anti-inflammatory and cleansing effect of dry sodium chloride aerosol results in the decrease or disappearance of lung diseases' symptoms in the pulmonary system.**

\* Alina V. Chervinskaya, 2001

## Morbidity with Temporary Disability before and after 6 Months after Halotherapy (HT) by Pulmonary Patients (n=345)\*

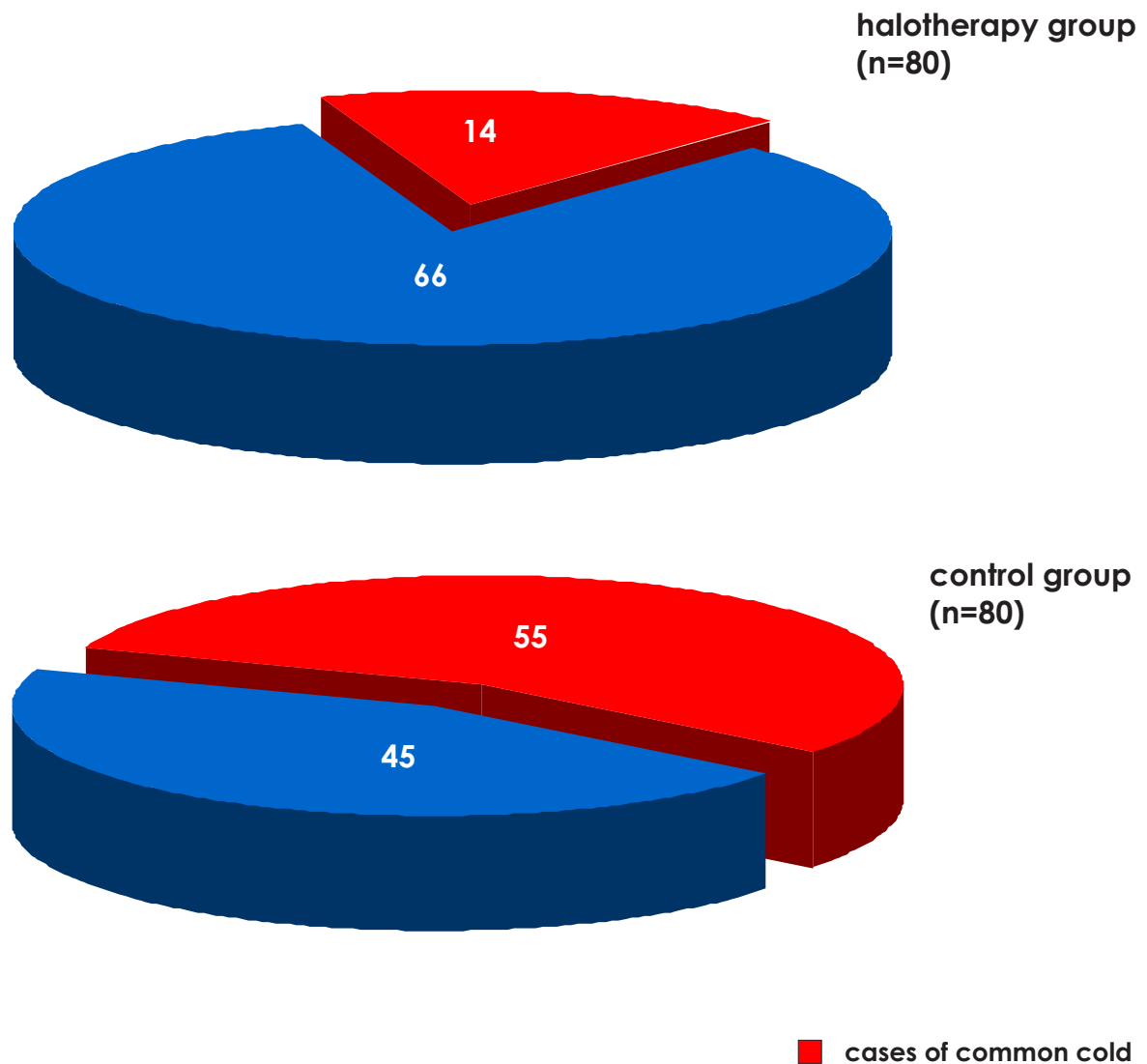


Analysis of morbidity with temporary disability by the patients with various pulmonary diseases was conducted during 6 months before the application halotherapy and six months after.

**It has shown that the application of the method assured 1.5–2 times reduction of morbidity level by the patient population.**

\* Alina V. Chervinskaya, 2001

## Dry Salt Aerosol for the Prevention of Common Cold\*



During clinical observation for three months, there were 14 cases of cold and 104 days marked by symptoms of acute respiratory viral infection. In the control group there were 55 cases of cold and 585 days of the symptoms.

\* Alina V. Chervinskaya, 2001

## Halotherapy Against Pollen Allergy



**Dry sodium chloride aerosol eliminates airborne pollen particles from airways.**

**The air composition strengthens immunity and better immunity decreases allergic reaction to pollens.**

## Halotherapy and HaloSPA for Dermatology and Cosmetology

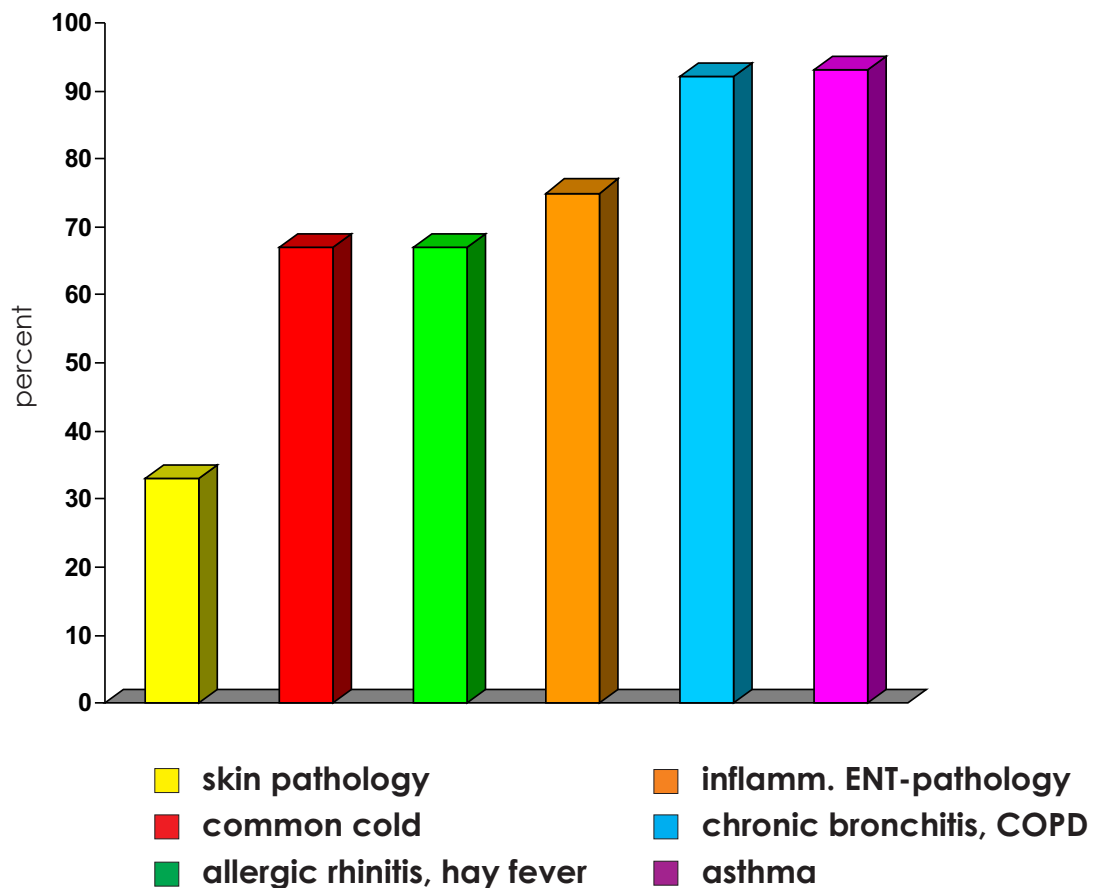


Dry sodium chloride aerosol increases activity of skin cell ion channels and activates electrophysiological activity that determines skin protective properties.

Normalization of skin autoflora composition, bacteriostatic, antiedematous and anti-inflammatory effect after halotherapy is determined.

**Dry sodium chloride aerosol has a revitalizing and cleansing effect on the skin**

## Halotherapy Prescription in 60 Healthcare Institutions (data of questionnaire design)



More frequently halotherapy is used for preventive and restorative treatment of pulmonary diseases – asthma, chronic bronchitis, chronic obstructive pulmonary diseases (COPD).

Method is applied for treatment and preventive of ENT–pathology, hay fever, common cold, skin diseases as well.

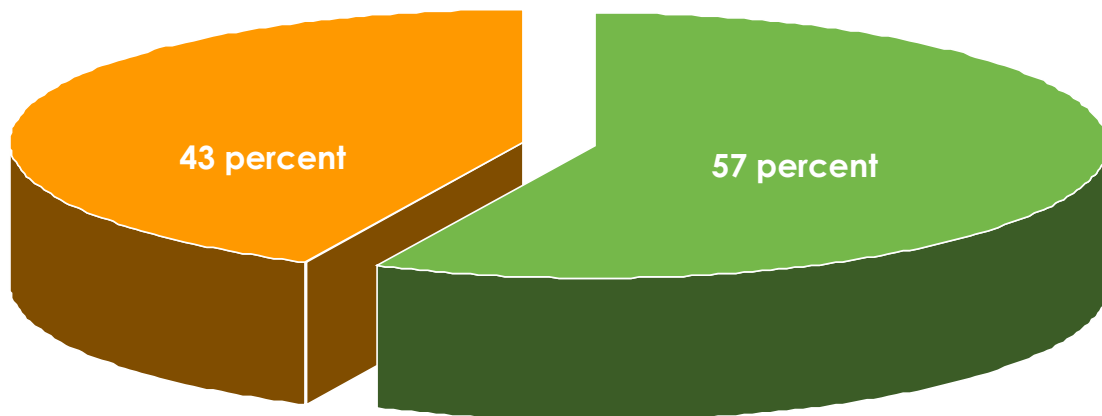


## Efficiency of Halotherapy According to the Data of Physicians of 10 Medical Hospitals and Out-patient's Departments\*

Nosologic form	Number of Patients	Improvement, percent (M ± m)
<b>Bronchial Asthma</b>	<b>1818</b>	<b>85,4–4,0</b>
<b>Chronic Obstructive Bronchitis</b>	<b>1242</b>	<b>92,3–3,3</b>
<b>Chronic Non-Obstructive Bronchitis</b>	<b>689</b>	<b>86,0–6,1</b>
<b>Acute Bronchitis</b>	<b>163</b>	<b>80,4–8,1</b>
<b>Pneumonia</b>	<b>160</b>	<b>82,0–5,5</b>
<b>Bronchiectatic Disease, Cystic Fibrosis</b>	<b>47</b>	<b>90,0–4,9</b>
<b>Pneumoconiosis</b>	<b>48</b>	<b>96,2–4,1</b>
<b>Pollinosis</b>	<b>38</b>	<b>81,4–7,2</b>
<b>Chronic Rhinitis and Rhinosinusopathy, Maxillary Sinusitis</b>	<b>178</b>	<b>85,1–5,6</b>
<b>Chronic Pharyngitis, Tonsillitis, Laryngotracheitis</b>	<b>120</b>	<b>71,0–6,7</b>
<b>Skin Diseases</b>	<b>86</b>	<b>61,5–6,7</b>

\* Alina V. Chervinskaya, 2001

## Where Are the Halomed Salt Rooms Applied?



- Clinics
- Hospitals
- Out-patient's departments
- Medical rehabilitation centers
- Preschool institutions
- Private clinics
- Centers of natural therapy
- Health resort medicine
- SPA-centers
- Wellness-centers
- Hotels
- Private houses

## What Do the Visitors Get from the Halomed Salt Rooms?

- Natural medicine-free treatment of respiratory and skin problems
- Cleansing and sanitation of the airways
- Enhancement of airways' defence mechanisms
- Enhance biological and immune host defense mechanisms
- Decrease of base medication load



## What Are the Advantages of Halomed Salt Rooms for the Visitors?

Scientific approval of the mechanisms of action

High efficiency

Adaptation to diverse medical and health improving approaches

No invasiveness, no side effects

Comfort and convenience

Combination with relaxation

Removal of physical and psychic emotional discomforts

Novelty and attractivity for the visitors



## What Are the Target Groups?

People with the following discomforts can expect beneficial physical effects by taking halotherapy sessions on a frequent basis:

Chronic pulmonary diseases (asthma, chronic obstructive pulmonary diseases, pneumonia, bronchitis, cystic fibrosis)

Allergies with an effect on ear, nose, throat, sinuses (e.g. hay fever)

ENT-diseases (rhinitis, sinusitis, pharyngitis, laryngitis)

Prevention and treatment common cold

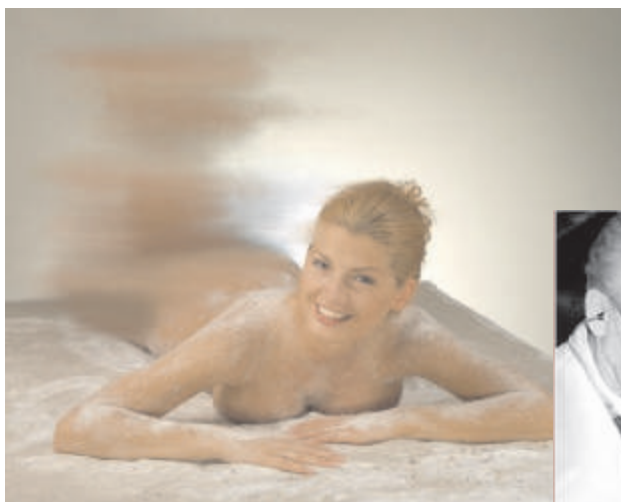
Respiratory hygiene to clean airways from harmful airborne and tobacco smoke particles

Dermatological disorders (acne, neurodermatitis, psoriasis, cellulite)

Heart and vascular problems (especially in combination with lung diseases)

Vegetative nervous system disorders

Inability to loose fat tissue due to disturbed metabolism



## What Are the Target Groups?

People with the following discomforts can expect beneficial mental effects by taking halotherapy sessions on a frequent basis:

- Chronicle fatigue
- Overstrain and exhauster
- Depression
- Low stress resistance
- Quit tobacco smoking



Rock salt (halite)