National Academy of Sciences of Ukraine
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NORMOBARIC
HYPOXITERAPIA EFFECTS
VENTILATORY CAPACITY
ON THE LUNGS OF
CHILDREN LIVING IN
RADIOACTIVE
CONTAMINATED AREAS



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«Гиппократ осматривает ребенка» Роберт Том, 1950

«CONTRARIA CONTRARIIS CURANTUR» - противоположное излечивается противоположным «MEDICUS CURAT, NATURA SANAT» – врач лечит, природа излечивает (Гиппократ)



N. N. Sirotinin

Developed the principle of stage acclimatization in the mountains showed the possibility of adaptation making use of alpine climate to increase the body's resistance to some extreme influences.

The founder of such trends in home medicine as immunology, alpine physiology, critical care medicine, space medicine.

Сиротинин Н.Н. Сравнительная физиология акклиматизации к высокогорному климату, в кн.: Кислородная недостаточность. / Н.Н. Сиротин — Киев, 1963 г. Стрелков Р.Б. Нормобарическая гипокситерапия: [метод. рекомендации] / Р.Б. Стрелков. — Москва, 1988 — 17 с Березовський В.Я. Технологія підвищення резистентності організму за допомогою гіпокситерапії: [метод. рекомендації] / В.Я Березовський, Є.М. Горбань, М.І. Лєвашов, А. Д. Сутковський. — Київ, 2000 — 23 с.







Apparatus of mountain air «Borey»

#### **PURPOSE**

 THE OBJECTIVE OF THE WORK IS TO EXAMINE THE EFFECTIVENESS OF THE USE OF INSTRUMENTAL NORMOBARIC OROTERAPIA OF THE CHILDREN WHO LIVE IN THE RADIOACTIVE CONTAMINATED AREAS





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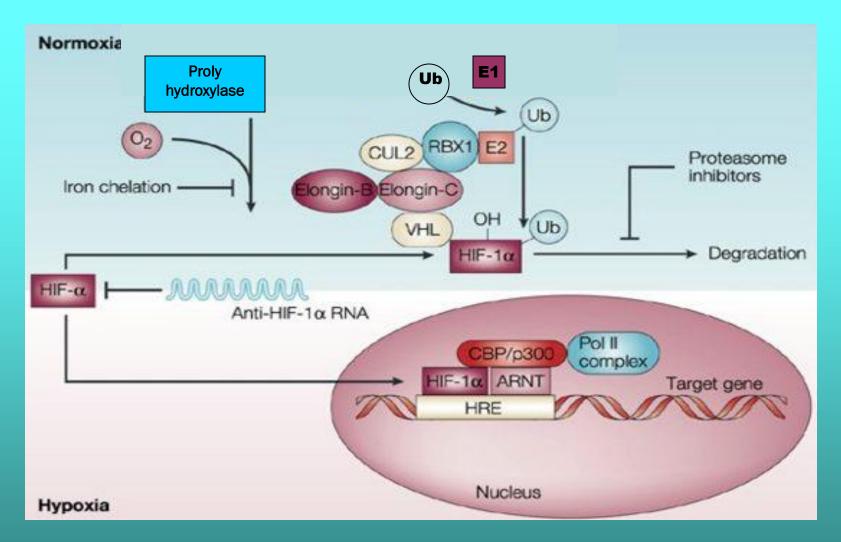


#### **Materials and methods:**

- 52 children aged from 6 to 17 were examined were hospitalized at the clinic NRCRM.
- The study of pulmonary ventilation capacity was performed with automated pnevmotachometer.
- For breathing hypoxic gas mixture was used apparatus «Borey».



Sessions of artificial mountain air breathing



The mechanism of the stimulating action of reduced *P*o2 realized by the gene activation unit.

HIF- $1\alpha$  – highly sensitive to the partial pressure of oxygen and implement a specific function in the regulation of gene expression.

# Normobaric hypoxiterapia effects ventilatory capacity of the lungs of children with bronchospasm.

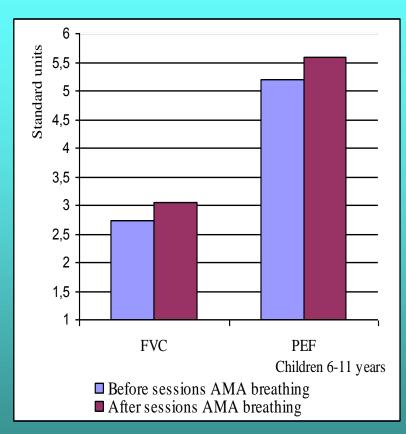


Fig. 1. Results FVC and PEF before and after sessions AMA breathing (group I children) \*P<0,05.

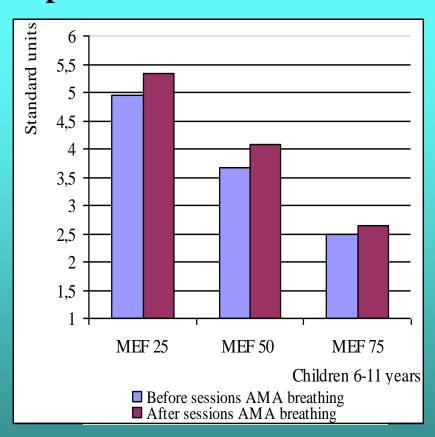


Fig. 2. Results MEF25, MEF50, MEF75 before and after sessions AMA breathing (group I children)\*P<0,05.

# Normobaric hypoxiterapia effects ventilatory capacity of the lungs of children the clinical manifestation of respiratory organs deseases

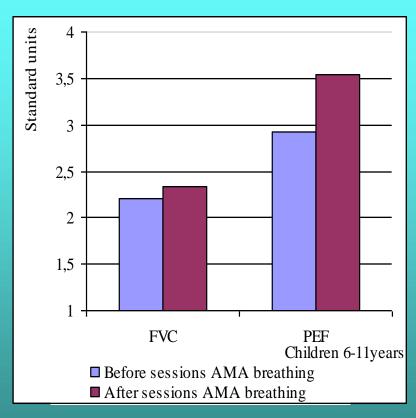


Fig. 3. Results FVC and PEF before and after sessions AMA breathing (group II children) \*P<0,05.

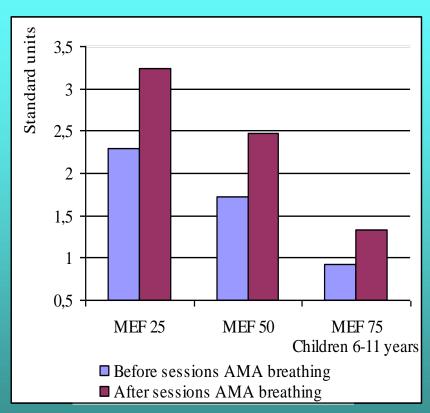


Fig. 4. Results MEF25, MEF50, MEF75 before and after sessions AMA breathing (group II children)\*P<0,05.

## **CONCLUSIONS**

- After breathing sessions instrumental oroterapii in both groups children register increased pulmonary ventilation capacity.
- For bronhocpasmus elimination of children without the clinical manifestations of respiratory organs deceases instrumental oroterapia was used alone without any medication.
- Children living in radioactive contaminated areas suffering from respiratory organs diseases instrumental oroterapia significantly increases the ventilator capacity of the lungs and decreases the tern of treatment.















Гипокситерапия, как перо Жар-птицы дарит здоровье!