# The application of hippo therapy as a method of remedial gymnastics, on the basis of the regional pulmonological sanatorium “Maliatko.”

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# *How horse can help ?*


**In spite of the controversial attitude to the application of hippo therapy that different physicians have, the administration of sanatorium “Maliatko” has decided to develop this kind of physiotherapy, after all the benefit that the children can get from the treatment is indisputable, despite its significant cost and the necessity of the special conditioning for the animals.**

There are many publications which describe the results of the hippotherapy treatment of locomotor apparatus dysfunctions and various neurological disorders, at the same time the experience of its application in the treatment of pulmonological disorders has non been described, actually they only mention the fact that in case the patient is not allergic to the animal dander, the developmental horse riding is not contraindicated.

Considering the background of our sanatorium, namely the treatment of pulmonological disorders, we had to find some alternative ways in order to salve this problem.

With that purpose we have gathered a group of physicians and specialists in hippo therapy which while working together has defined a certain approach in pulmonological disorders treatment, on the basis of needs and hippo therapeutic resources of the sanatorium (we should point out that the specialists in hippo therapy who work in our sanatorium have a great experience but only working as a horse riding instructors).

We have created our own method of hippo therapeutic impact, which allows to unify its level of influence on a patient and at the same time allows to have some relatively objective control of the treatment.

While working at the method we tried to take into consideration the multifactor character of hippo therapy impact on a child.

## Factor № 1.

Most training classes in horse riding are held in the open air (if the weather is favourable) or in a well - aired room, this favours the sufficient lungs ventilation and more intensive oxygenation of a child's body and also stimulates the brain function and the work of different muscle groups by improving their blood circulation.

## Factor № 2.
## Dosed physical load.

The training duration was increased gradually, from 10 to 45 min., this fact allowed the children to get used to a new physical activity without unnecessary stress.

The horse riding permits to activate all muscle groups, including the muscles of the rib cage, it gives the additional training to the intercostal muscles, favours a better ventilation of lower lungs , the similar effect can not be achieved by simply walking.

# Factor № 3.
# Multidirectional movements

Multidirectional movements (upward, in front, downward) during the horse riding, including the periodic change of the posture of the patient stimulates the expectoration of the sputum from the small alveoli, facilitates the lower lungs ventilation, stimulates the motor activity of the bronchial tree. All this results in the expectoration of the thick sputum, its stagnation often causes difficult complications which may result from respiratory organs diseases.

## Factor № 4.

The list of the medications used in the bronchial asthma treatment (we provide the asthma treatment in “Maliatko” as well) necessarily includes glucocorticoids (epinephrine, dexamethasone, prednisolone), the application of these medications is not always easy when we cure children, it is almost impossible to define the correct dose and there is a high risk of side effects.

If a person has ever tried riding a horse even once in life, he or she knows that the horse riding takes a certain mobilization of will efforts – you have to overcome your fear.

The adrenocorticotropic hormone in our body is epinephrine, so called “the fear hormone”. We can presume that the regular horse riding stimulates endogenous glucocorticoids in our body, which at the same time reduce the inflammation of bronchial mucous membrane, widen the bronchial space and prevent the asthmatic attacks, they also help to reduce the quantity or at least the dose of the medicine the child has to assume. For sure, **this improves the quality of life** of our little patients.

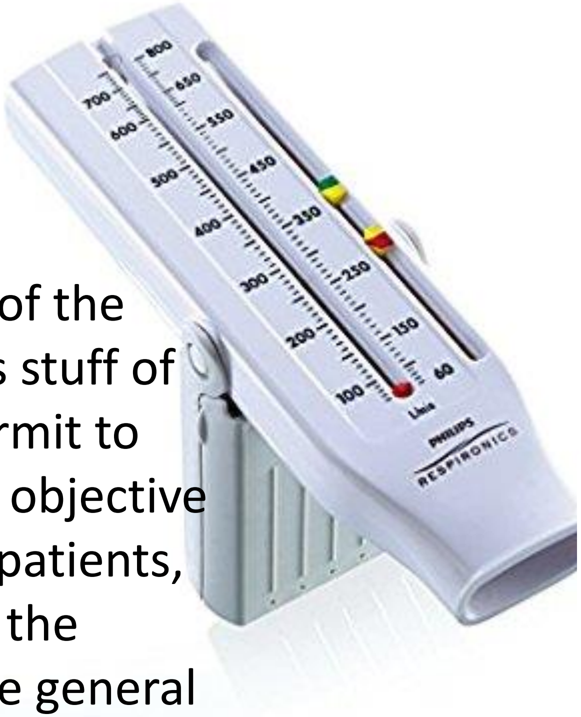
**However, it is necessary to be extremely careful increasing the duration of the horse riding training because an excessive physical load can cause an asthmatic attack.**

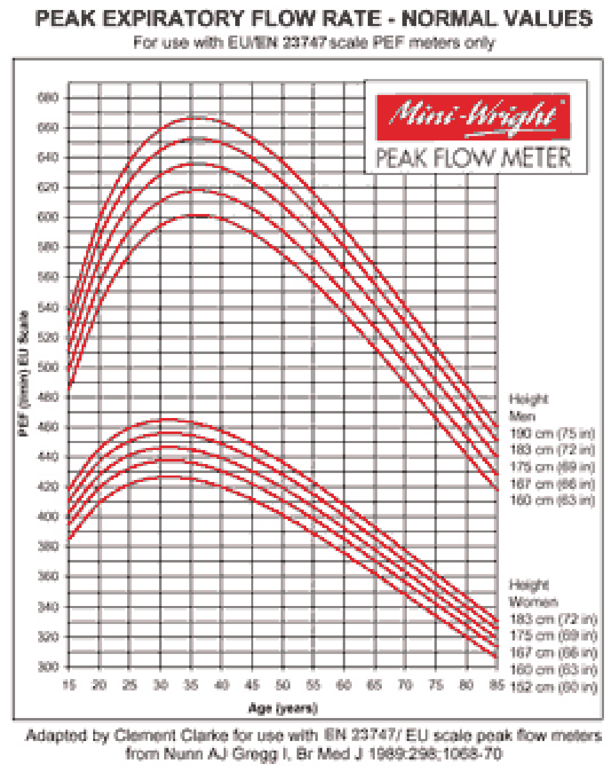
### Factor № 5.

We should also consider the psycho emotional factor .The child who realizes that he or she was able to find common language with a horse ( to learn how to ride a horse), an animal much bigger and stronger than  he or she  starts to feel more confident and even long after the horse riding training remains in a positive emotional state which is not only  an essential constituent part of **a healthy life style** in general but also is a part of the treatment which aims to overcome the anxiety and depression caused by a chronic somatic disorder.

**During the summer 2017 in the sanatorium “Maliatko” we brought 30 children age from 7 to 9 into a healthy state working according to the earlier approved hippo therapeutic method. The children were mostly with chronic respiratory organs disorders in remission.**

The equipment of the sanatorium and its stuff of professionals permit to conduct a detailed, objective examination of its patients, starting from the anthropometry, the general blood test and ending with the functional methods such as electrocardiography, spirometry, peak flowmetry.



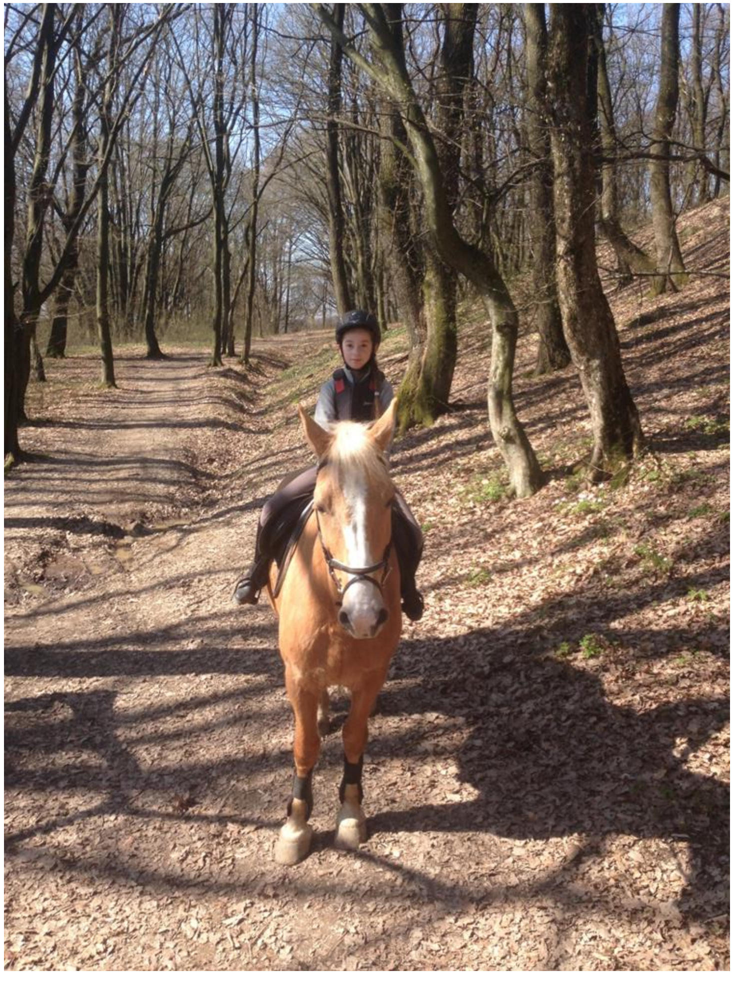



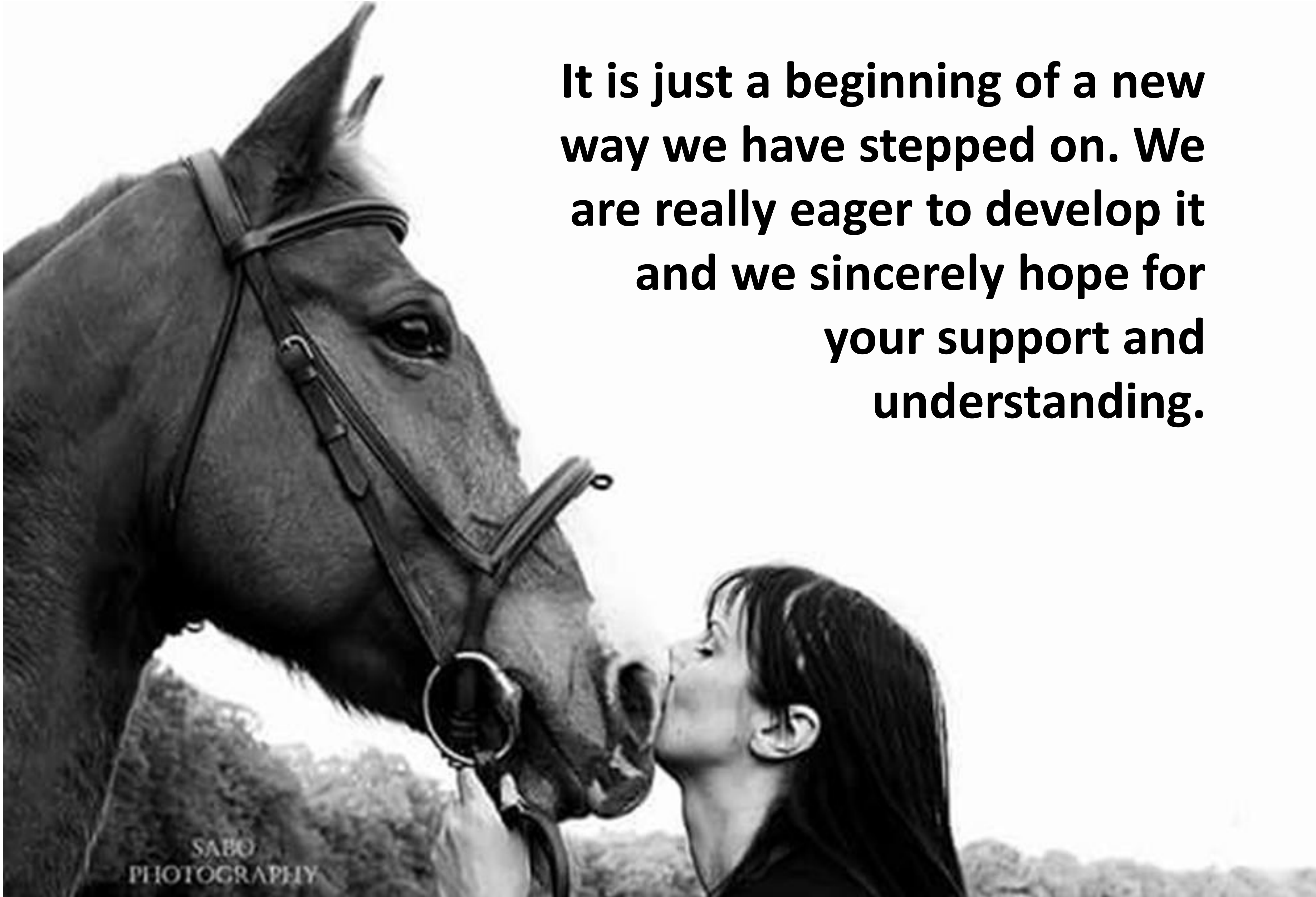
These functional methods were used as a basis for the examination of the external respiration of the children before and after the horse riding trainings. The received results were just striking.

***(FEV) forced aspiratory volume measured after a horse riding training increased 8 % on average.***

**The FEV in a normal state, not after exercise, has increased 4% after the whole course of treatment in comparison with its values before the course. That shows a considerable improvement of the external respiratory function among this category of patients.**

Of course, such a small quantity of patients can not give us statistically valid results; the precise diagnosis differentiation has not also been done. There was no professional psychological evaluation of the psycho emotional state of our little patients.




It is just a beginning of a new way we have stepped on. We are really eager to develop it and we sincerely hope for your support and understanding.
SABO PHOTOGRAPHY

Thank you for
your kind attention