Benefits of HYPOXcontrol

- » Portable interval altitude therapy device for customised altitude therapy plans
- » Altitude simulations of up to 6,000 metres at intervals with concentrated oxygen
- » Real time monitoring of all relevant vital signs
- » Touch screen for intuitive and autonomous therapy control
- » Biofeedback for determining the personal tolerance levels for changes in altitude
- » Intelligent analysis software for fully documenting therapy results
- » Database for saving profiles and therapy data
- » Saving personal data on a chip card and network connection capabilities
- » Certified medical device

Medical fields and indications (excerpt)

Cell metabolism and vascular reaction

- » Erythropoiesis is enhanced by the increased secretion of erythropoietin (EPO), thereby improving oxygen transport capacities.
- » Improvement of microcirculation through the increased angiogenesis factors: VEGF, MMP2, MMP9, endostatin
- » Higher energy supply resulting from the increase in the number of mitochondria as well as the glycolytic system & glucose transporters
- » Increases insulin sensitivity
- » Concomitant therapy for metabolic syndrome: type II diabetes mellitus, obesity and high blood pressure
- » Improved wound and bone healing
- » Optimises rehabilitation time after surgical interventions and injuries
- » Supportive effects when strengthening the immune system
- » Concomitant treatment for Lyme disease

Cardiovascular system

- » Increases the body's physical and mental endurance levels
- » Increases endothelin & adrenomedullin, whereby vascular tone is increased and capillarization is improved
- » Increases cardiac output per minute
- » Lowers blood pressure over the long-term

Respiratory system

- » Concomitant treatment and therapy in cases of impaired pulmonary ventilation
- » Optimises respiratory function in cases of asthma, COPD and obstructive sleep apnoea

Nervous system and psyche

- » Concomitant treatment for pain therapy
- » Therapy and concomitant treatment for chronic fatigue syndrome (CFS), burnout syndrome and depression
- » Increases a person's ability to concentrate

Positive metabolic effects of hypO₂xia on the body

Increases physical fitness

- » Increases resting lactate levels
- » Increases insulin sensitivity
- » Lowers blood pressure

The energy supply for cells is improved

- » Increased production of the glycolytic system & glucose transporters
- » Increasing number of mitochondria

hypO₂xia-inducible factor HIF-1 Alpha

The body is placed under reduced oxygen conditions.

These lower levels of oxygen lead

to signal transmission via the

Increased vascularization

The transport of

oxygen is improved

Increased EPO in the kidneys

» Additional red blood cells

are produced in the

bone marrow

- » Increases the angiogenesis factors VEGF, MMP2, MMP9, endostatin
- » Increased capillarization

Vascular tone is increased

- » Increases endothelin& adrenomedullin
- » Improves blood circulation

Increased iron metabolism

- » Increases production of transferrins and cerruplasmins
- » Promotes erythropoiesis

Improves the supply of oxygen to the body



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Technical changes and errors excepted. Ref. A 04.2016







The efficient altitude therapy system with concentrated oxygen







The efficient altitude therapy system with concentrated oxygen

Innovative & Portable

HYPOXcontrol is an efficient and versatile altitude therapy system. Altitude interval therapies are recommended for any patient who wants to effectively **strengthen their cardiovascular system during rehabilitation**, **while putting little strain on muscles and joints**. Positive rehabilitation results can be achieved quickly with this system. The one-of-a-kind HYPOXcontrol **portable therapy system** gives patients air with reduced oxygen levels – hypO₂xic – to breathe during the first interval and provides them with oxygen-enriched air – hyperO₂xic – in the second interval. With this **interval altitude therapy concept**, the body's own altitude acclimatisation effects can be utilised to quickly achieve positive rehabilitation results, and it can be used as a preventative therapy for a wide array of medical fields.

Automatic & Simple

The unique HYPOXcontrol **biofeedback** is the first step before creating a personal treatment and therapy plan. The vital signs are monitored during a step test and the current altitude therapy level is automatically determined. A personal and **safe altitude therapy level** is selected for the patient based on this test.





Intuitive & Personalised

The therapist can configure a **personalised hypO₂xic and hyperO₂xic interval therapy** plan on the touch screen display by using the intuitive software interface, and the settings can be saved on a chip card.





HYPOXcontrol can be used flexibly in any professional hospital or institutional setting

Safe & Reliable

All relevant vital signs are depicted on a real-time graphical overview during the biofeedback phase and the entire altitude interval therapy session; they are monitored **reliably and safely** using the **pre-set safety limits**.

Compatible & Progressive

An **existing computer system** can be easily used to **analyse rehabilitation results** as efficiently as possible.





Effective & Efficient

In addition to taking conventional vital signs, such as the heart rate and oxygen saturation levels, the device also indicates, saves and evaluates **unique vital signs**, like heart rate variability and the transcutaneous partial pressure of oxygen.









Well-designed & Clearly Organised

While using the **analysis software interface**, all interval altitude therapy sessions can be documented in a **clearly organised therapy report**, which can be distributed as a PDF document. Moreover, up to five different therapy sessions can be shown on a tabular and graphical overview for comparison and analysis purposes.