



Our research has resulted  
in an innovative  
device to improve  
the quality of life.

## The Human Body Posturizer

An advanced and innovative system to improve postural structure.

The Human Body Posturizer (H.B.P.), conceived and designed by Prof. Maurizio Ripani and colleagues, utilises the latest technology and innovative features which enhance its effectiveness both in terms of motor rehabilitation and re-education.

The system plays an advanced role in the safeguarding and promotion of health, both in medical and social contexts. Years of extensive research and experimentation have enabled us to produce such a system which consists of a series of interacting elements.

The key concept of our innovative system is based on its fully mobile mechanical component, which enables users to adopt an improved posture in the neutral position.

Moreover, being composed of multiple segments, which adapt themselves to one's body shape, it acts especially on the peripheral receptors which, by transmitting impulses to the supra-axial nerve centres, allows users to adopt a new and improved postural structure.

### Scientific Committee

Prof. Gianfranco Gualdi, *Radiologist*

Dott. Giuseppe Ficola, *Dentist*

Prof. Fabrizio Margheritini, *Orthopaedic surgeon*

Prof. Vincenzo Marigliano, *Geriatrician*

Prof. Fabio Pigozzi, *Sports medicine physician*

Prof. Franco Postacchini, *Orthopaedic surgeon*

Prof. Maurizio Ripani, *Anatomy specialist*

Prof. Vincenzo Romano Spica, *Hygienist*

Prof. Stefano Vecchione, *Orthopaedic surgeon*

Prof. Vincenzo Saraceni, *Physiatrist*

Prof. Enzo Esposito, *Neurosurgeon*

Dott. Luca Padua, *Neurophysiopathology Specialist*



# HBP

HUMAN BODY POSTURIZER

A new concept in  
postural re-education,  
maximum comfort and  
total freedom of movement.

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The H.B.P. is a fully articulated orthosis, consisting of four basic elements which come into contact with different anatomical zones, and able to adapt themselves to the physical characteristics of each individual. As a result, users enjoy greater freedom of movement and continuous central reprogramming of the users' postural attitude.

The first modular and plastic element is that which rests on the back. Its central part is adjustable and is secured to the shoulders with braces. It adheres to the trunk, thanks to two flexible lateral supports which adapt to the chest and which are frontally fixed with straps.

The second, cranio-cervical, element is characterised by a helmet placed on the wearer's head and on the top of which is inserted a cervical spring mechanism which connects the helmet to the dorsal element, thus enabling complex head and neck movements.

The third, modular and plastic, lumbo-sacral, element is positioned at the centre of the sacrum. This, in turn, is articulated with the dorsal element and, through the adjustable lateral supports that surround the pelvis, is frontally secured with straps. This element is also characterised by the presence of a mobile and adjustable support which allows users to apply thrust, of greater or lesser intensity, to the lumbar region. It should be noted that the internal sacral part is characterised by forward thrust which is required in order to reposition the pelvis.

The fourth and final, modular and plastic, element is that which relates to the lower limbs. Each limb is inserted into the lateral pelvic supports and, placing them at the height of the hip joint, the brackets are laterally positioned at the thigh and the leg. It is important to position the articulated joint between the thigh and leg at knee height. The two moulded brackets are fixed to the limbs by means of straps.

Given the versatility of the innovative H.B.P. system, it may be worn by the user in its entirety or, alternatively, only choosing to wear some of its elements.



Wearing the H.B.P. for a minimum of thirty/forty minutes a day, will result in the reorganisation of the postural structure, beneficial load redistribution and the disappearance of any pain and discomfort.

The H.B.P., being designed from an engineering and anatomico-functional viewpoint, has allowed us to clinically evaluate it through preliminary scientific studies, the results of which are reported below.

An initial study was conducted on a sample of patients, with incorrect postural attitude, belonging to various age groups. Patients underwent clinical evaluation with scientifically recognised, non-invasive, diagnostic tools, before and after having worn the H.B.P. for 30 minutes/day on alternate days for a total of 20 days. The subjects also completed scientifically ascertained questionnaires to record any changes in their quality of life, in addition to their subjective feelings and any improvement in their symptomatology after using the H.B.P.

Use of the H.B.P. for the pre-defined period resulted in clinical results which demonstrated the achievement of improved overall body alignment and a better distribution of loads on the plantar vault. In addition, the data extrapolated from the questionnaires showed that most users experienced the disappearance, or reduction, of pain, a feeling of lightness in one's gait and a sensation of improved balance. The second preliminary study was, instead, conducted on a sample of elderly patients compared with a control group. After using the H.B.P. they reported excellent results compared to the control group, even in the older age group in terms of improvement in balance, SPPB (Short Physical Performance Battery), VAS. Scientific studies are continuing on several fronts.

The H.B.P. may be used for rehabilitation therapy in water. It is constructed entirely of extremely light and durable plastic materials and metal alloys. These materials are hypoallergenic, therefore the H.B.P. may be worn in contact with the skin. It may be washed with detergent and liquids for sterilisation. The complete system weighs just 1.5 kg.



per informazioni

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