

What's the hype abo

The Huber offers a host of benefits for athletic performance and rehabilitation. *Performance Pro* chats to professionals who are currently using the apparatus, and are experiencing notable results

“**T**he Huber, in principle, is a stability apparatus focusing on developing co-ordination, balance, movement and posture of the muscular chains.

The Huber challenges the neuro-muscular system through the use of a motorised platform, similar to a wobble board, forcing the subject's muscles to work harder to overcome this 'stressful' environment. This motorised platform provides numerous possibilities for unique proprioceptive exercises that help optimise motor co-ordination, stimulate balance and improve posture,” says Chris Lippstreu, personal trainer at Transfit, Ultimate Fitness Conditioning.

SPORTS PERFORMANCE

“The Huber focuses on developing more stable joints, with the emphasis on posture and balance. With the current trend in sports conditioning to develop a stronger core, the Huber optimises joint stability as well as teaching the body to work as a unit. Therefore, hypothetically, an athlete with a more balanced and stable core will be more economical and efficient in their performance,” says Lippstreu.

“The Huber records work-out information, such as strength and co-ordination, as well as differences between left and right, allowing the subject to single out what imbalances are present in the body. From this we can rectify the imbalances, therefore limiting potential injuries, as well as developing the body as a stronger unit. For example, if an athlete has a stronger and more co-ordinated side, we can set the machine to focus on the weaker side, thus conditioning it to become stronger and more co-ordinated,” he adds.

The exercises on the Huber are performed in a controlled manner, meaning that most exercises are performed in a stationary position, therefore limiting risk to any existing injuries that clients



may have. “This enables the client's posture and body positioning to be monitored, allowing trainers to assess any postural deviations of the body, such as khyphosis and lordosis. In this way, the trainers can target these problem areas and improve any deviations in the spine or joint areas. We are, therefore, able to use the Huber for prehabilitation, preventing any possible injuries that might arise from current posture conditions,” says Lippstreu. “We have also found that the Huber is a great tool for stretching. With the use of the motorised platform, clients are able to stretch the articulations through the full range of motion, without the help of a trainer, as the pivoting platform assists the client through its range of motion.”

Rehabilitation work

Physiotherapists, Lorinda Mulder and Susanna Humphries, highlight the Huber's ability to strengthen the core stabilisers of the spinal column (M. Multifidus, M. Transverse Abdominus): “To achieve this goal, the patient or athlete is forced to use the intrinsic muscles of the feet, co-contraction of the various muscle groups of the lower leg, balance the muscle groups around the knee, co-contraction of the hip flexors and extensors, abductors and adductors and rotators.

ut Huber?



ABOVE: General exercise protocol on Huber. BELOW: Stretching and cooling down after Huber exercise.



"In the upper body, the movement is initiated through the shoulder girdle down to the upper arm, forearm, wrists, and hands. Isometric co-contraction of the rotator cuff of the shoulder, Lattissimus dorsi, Serratis anterior and pectoral muscles produce a stabilising effect on the shoulder. Only by contracting all the muscle groups in the back, abdomen, thoracic spine, legs and arms, can one achieve this goal, and only then will a positive feedback be achieved. During the exercise, the monitor displays whether the pressure is sufficient, too low or too high. The patient or athlete can thus correct the stance and posture at any time during the exercise.

"Not only does the Huber enhance balance through the stimulation of the stabilising muscles and postural muscles, but it also has an effect on the inner-ear balance receptors. The apparatus also enhances concentration as well as co-ordination, due to immediate visual feedback. This feedback also enables the therapist or trainer to document an objective improvement in the patient or athlete's progression."

Back care

Probably the largest percentage of patients seeking physiotherapy suffer from spinal pain syndromes, say Mulder and Humphries. "During the warm-up and stretching phase, the Huber gently mobilises the spine. Due to the variable speed and amplitude of the platform, even elderly people and osteoporosis patients can be treated. For patients to cope with their problem, they need to be able to manage their pain. By strengthening the spinal (core) stabilisers, and correct body posture, the person can cope with daily life. Not only does the Huber achieve this goal, it also teaches the person how to maintain that deep core stabilisation while daily activities are performed."

Post-fractured ankle

Mulder and Humphries treated a 24-year old female defence force member with the Huber four weeks after the fibre cast was removed. "The first session commenced with free level to reduce the speed and amplitude of the platform. Exercises with feet side-by-side, apart, and in front of each other were given. >>

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PRODUCT INSIGHT

After ensuring that the patient had not experienced any pain or discomfort, we proceeded to get her to stand on the affected leg only. She immediately mastered the pressure and her scores were all above 70% (target above 80%).

"We then progressed to the Discovery level (the easiest pre-set level) the following day, repeating the same set of exercises that we had done the day before. Her scores were above 80%. During the next session, we proceeded to the intermediate level. Her scores were above 70%. We then played around with intermediate and free levels for the next few sessions, concentrating more on the stance of the foot and the balance on the foot. During the sixth session, we moved to the advanced level, completing the same exercises as on day one. For the first three exercises her scores were above 80%, however, she only reached 60% on the last exercise, as her legs started to shake from exhaustion. By session ten, she did not complain of any more stiffness or discomfort, her legs did not shake, and her scores were all above 90%."

Rotator cuff injury

Due to the fact that the upper body and abdomen are in a stationary position, to achieve the desired core stabilisation while the lower body is moving, the effect of the Huber on the shoulder is that of stabilisation of the shoulder girdle. This strengthens the muscles of the shoulder girdle and entire arm. Mulder and Humphries used the Huber to treat a 40-year old artisan who had hurt his right arm playing action cricket. Three days of treatment saw his scores increase from 50% for the affected arm and 70% for the sound arm to 80% overall, and he could maintain protraction four times for 50 seconds.

Neurology

Mulder and Humphries addressed a 10-year old child's stiffness and disassociation between upper and lower body with the Huber. The child had experienced brain injury after birth and part of her lung was removed. "Her balance was really bad; her right leg was shorter than the left; and she was moderately spastic. By the fourth session, kneeling was added to the routine, and she could keep her balance without holding on. Lateral movement of the trunk was also detected. Gradually increasing the amplitude and speed of the Huber over 10 treatments to 80, and progressing to half-kneeling and bending forward movements, the child did not have to hold on any more, and has full rotational and lateral movements on and off the Huber. She can climb on a off the equipment by herself, without holding on. The right side of her body, which used to be shortened, is totally flexible, and even her Tendo-Achilles that used to pull is flexible."

ADDITIONAL BENEFITS

The Huber can also be used to address knee pathology, balancing the quadriceps mechanism – this is particularly beneficial for long distance runners and cyclists; and foot pathology – the weight-bearing and intrinsic muscle balancing have been known to straighten clawed toes. There is also a special programme to enhance the mobility and strength of the golf swing.

The apparatus can improve core stability after spinal surgery. Mulder and Humphries recommend that one start on free level with the platform amplitude and rotation on low: "Within the limits of the surgery, the patient can rehabilitate to almost normal strength and mobility."

Muscle toning, body contouring and inch loss can also be achieved due to the deep muscle balancing and circulation, and skin tone is enhanced. "We have had great results with centimetre loss, particularly with our female clients," says Lippstreu. "Some of our clients have lost up to 20cm in one month of training. Clients have also gained a more toned physique with improved posture which, in turn, results in better day-to-day functioning." ♦