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### Clinical Assessment of the MOTomed therapy systems

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#### Product description:

MOTomed viva1  
MOTomed viva2  
MOTomed letto

#### Manufacturer:

RECK, Movement Therapy Systems, Betzenweiler

The therapy devices MOTomed viva1 and viva2 are used in the neurological clinic of the specialist clinic Wangen preferably for patients who are dependent on a wheelchair due to their disease or who can walk short distances only with considerable support. These are especially patients after traumatic brain injuries, stroke, subarachnoidal bleedings and inflammatory diseases of the brain that show hemiplegia or spastic paralysis on both sides due to this disease. Additionally according to the specialization of the clinic there are to a smaller extent also patients with substantial peripheral-neurogenous lesions e.g. within the scope of the Guillian-Barré-Syndrome or critical illness polyneuropathy.

The MOTomed therapy systems offer to those patients on the one hand the possibility to let the joints and legs be moved passively and on the other hand to improve muscle strength and coordination by active cycling against a resistance. Here the resistance can be adjusted

individually according to the possibilities of the patients. A big advantage is the individual adjustment ability with regard to movement amplitude, movement speed and the necessary strength input. Especially for patients with spastic paralysis whose muscle spasticity may vary after a short period of time, the special spasm control has proved itself. The passive range of motion of the joints is maintained or improved respectively, strength and coordination of the leg movement increase accordingly. Apart of this, positive side effects occur such as the improvement of venous backflow from the legs to prevent thrombosis as well as the support of the blood-circulation of the skin and muscles of the moved legs and thus the regulation of the circulation.

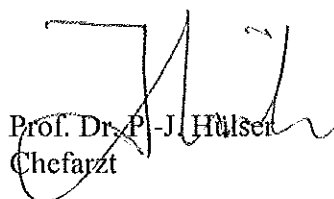
At the beginning these devices are therapeutically used only under supervision of a therapist who observes the settings of all parameters and adjusts those to the needs of the patients. Cognitively more efficient patients learn to adjust their device independently in a way that they profit from their treatment. The treatment period with the MOTomed device is partially scheduled prior to the therapeutic treatment to reduce e.g. an undesired high muscle tone in the legs.

The effect is evaluated predominantly very positive by the patients. Due to the positive effects also the therapists' acceptance for this therapy measure is substantial.

In our clinic we additionally treat patients that have been respirated artificially long-term due to their neuromuscular disease and also due to their strong overall disease with sepsis and multiple organ failures and thus have been confined to bed for a long period of time and that need to build up muscle strength again. With those patients that could not be mobilized to sit in a wheelchair due to their weak constitution at that point in time, the use of the MOTomed letto has been successful. In bed this offers the possibility to perform passive movement of the legs and if already possible for the patients also active movement. Herewith building up of muscle strength, cardiovascular training, improvement of the venous backflow and not last an overall activation are achieved. In the neurological clinic this device is predominantly used for patients with heavy peripheral tetra paralysis and especially for patients with proceeding Guillain-Barré-Syndrome or critical illness-neuropathy.

Important is surely that the devices are used in correspondence with a therapist. Negative effects or damages to the patients caused by the use of these therapy systems I have never seen occur.

To summarize, we find that the MOTomed therapy systems are according to our opinion an effective and valueable treatment possibility for the named patient groups.

  
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