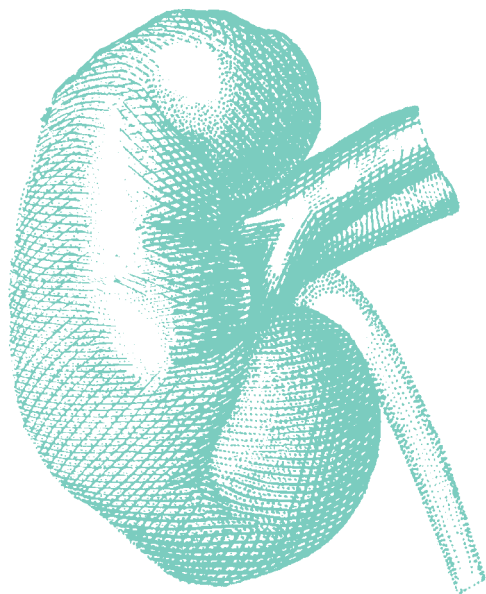


# Movement Therapy During Dialysis

Enjoy the Benefits of Regular  
Movement Therapy -  
Especially During Dialysis



## CONTENT

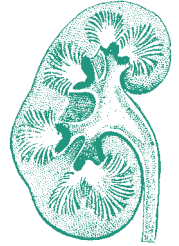
page

1. Physical Consequences of Kidney Insufficiency	2
2. What You Can Do...	2
3. Movement Can Help	3
4. Movement During Dialysis	3
5. Scientific Evidences	4
6. MovementTherapyDevice MOTomed letto2	5
7. Training with the MOTomed	6

## 1. Physical Consequences of Kidney Insufficiency

A large number of dialysis patients have to fight with various impairments as a result of kidney insufficiency. The disease and the time-consuming dialysis treatment will mostly lead to considerable lack of time for exercise and challenging physical activity. This often causes side effects like:

- hypertension
- anemia with tiredness and dizziness (renal anemia)
- bone structure disorders (renal osteopathy)
- muscular weakness (ureic myopathy)
- lipid metabolism disorder



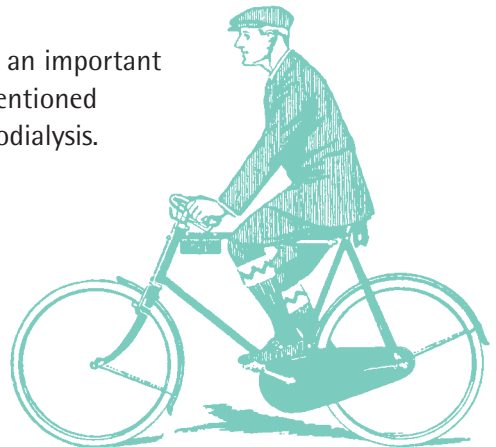
picture: kidney cross-section

These side effects and accompanying symptoms mostly cause a strong decrease of the general performance which results in limitations in mobility and independence in every day life. For the person concerned this is often equivalent with reduction in well being and quality of life.

## 2. What You Can Do...

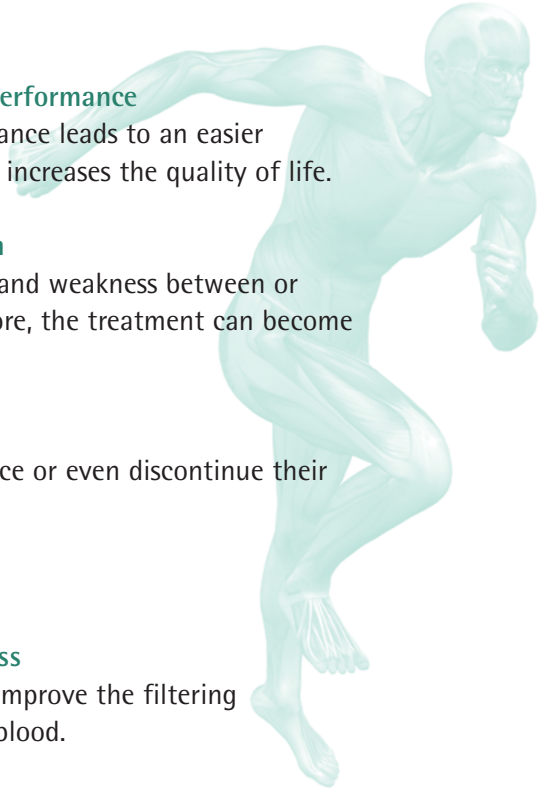
Regular movement therapy represents an important part of the treatment of the above mentioned results of kidney insufficiency or hemodialysis.

The positive results of exercise and movement (especially during dialysis) can stop or improve the usually very fast progressing degradation of the general performance.



### 3. Movement Can Help:

- >> **Improvement of the general performance**  
Increase of strength and endurance leads to an easier handling of daily activities and increases the quality of life.
- >> **Stabilization of the circulation**  
Fewer problems with dizziness and weakness between or during dialysis sessions. Therefore, the treatment can become less stressful for the patient.
- >> **Reduction of hypertension**  
Patients are partly able to reduce or even discontinue their antihypertensive medication.
- >> **Improvement of lipid value**
- >> **Increasing dialysis effectiveness**  
Movement during dialysis can improve the filtering of uraphanic substance in the blood.



### 4. Movement During Dialysis

Regular Movement for dialysis patients is highly recommended. Going to dialysis three times a week - there is often no time (or desire) left to spend precious spare time at a the sports club or the gym. That is one reason why movement during dialysis becomes more and more appealing and widespread.

The movement therapy during dialysis is not only fun and lets the time pass by faster, it is also an additional benefit:  
**A plus for your health and improving your quality of life.**

## 5. Scientific Evidence:

>> "A low intensity training program during dialysis is a valuable additional therapy that improves effectiveness of hemodialysis treatment as well as the patients' physical condition."

(PARSONS et al, 2006)\*

>> "[...] shows that the positive changes in physical functions, general health, social capability, vitality, and physical well-being are resulting from the movement therapy".

(BORREGAARD et al, 2003)\*

>> "Dialysis is very time consuming and patients often do not have the opportunity to exercise in their leisure time. In that case the training can be integrated into their dialysis treatment".

(KRAUSE, 2002)\*

>> "[...] there are first signs that an adequate intensive endurance training (e. g. with a bed bicycle ergometer) could lead to an activation of the muscles, tissue, and cell metabolism. This may lead to improvement in dialysis effectiveness".

(KRAUSE, 2002)\*

>> "44 % of the dialysis patients die as a result of heart and vascular diseases". That is why regular heart and circulation training is of particular importance to dialysis patients.

(HARNETT et al, 1995)\*

>> "[...] we come to the conclusion that ergometer training in bed during dialysis is safe for the patients and is technically feasible, while improving the patients' performance. This even leads to blood pressure regulation in some patients". (PAINTER et al, 1986)\*

# Get yourself Moving ...

...During Dialysis

## MOTOmed Movement Therapy

Movement stabilizes the cardiovascular system and the immune system, as well as the blood pressure situation.

This helps to reduce possible complications during dialysis such as dizziness, shocks, and loss of consciousness.



Take advantage of your dialysis treatment.

## 6. MOTOmed letto2 MovementTherapyDevice:

MOTOmed Movement Therapy: A pleasant cycling movement: passive | motor-assisted | active motion

The MOTOmed letto2 helps you to:

- >> take advantage of the time during dialysis
- >> do something for yourself and for your health
- >> train safely and independently at any training level
- >> enjoy movement with fun and results
- >> increase strength and endurance and reduce the challenges of everyday life

**Interested? – Just try the MOTOmed Movement Therapy at your local dialysis center.**

Ask your doctor for his recommendation.

Ask the nursing staff for a MOTOmed letto2 application during your dialysis treatment\*.

\*If there is no MOTOmed letto2 available at your dialysis center, please contact the Reck Company for possible demonstration or trial arrangements.


phone: +49 7374 18-85 | e-mail: [contact@motomed.com](mailto:contact@motomed.com)  
new information & innovations at [www.motomed.com](http://www.motomed.com)

**RECK MOTOmed**<sup>®</sup>  
Movement Therapy for a Better Quality of Life

## 7. The MOTOMed Training:

There are some points to be considered when engaging in MOTOMed training during dialysis in order to achieve optimum results:

- 1 If possible the training should be performed within the first 2 hours of the dialysis session. (In order to reduce the risk of cramps, drops in blood pressure, or shocks which in some cases occur as a result of lack of movement).
- 2 At the beginning of the training let your legs move passively with the MOTOMed for approx. 3-5 minutes in order to prepare your muscles, joints, metabolism, and your cardiovascular system for active physical training.
- 3 Additionally, let your legs move passively 3-5 minutes at the end of the training.
- 4 Particullary weak patients should first start with interval training (basic-endurance-program); the active training should include a 2-3 minute passive resting phase (the total active training time should be increased periodically, over several week periods and up to 20-25 minutes).
- 5 Patients with previous training (or after 4-6 weeks of basic endurance training) may complete a full constant training session (approx. 15-25 minutes) by choosing a resistance level that feels "slightly challenging" and doesn't overstrain the body.
- 6 After all, the training regularity and completion is more important than its intensity.



MOTOMed Movement  
Therapy:  
A pleasant cycling  
experience.

# Movement for Improvement ...Your Well-Being.\*



\* Regular MOTOmed Movement Therapy during dialysis can counteract the consequences of lack of movement, improve the heart and lung functions and endurance, and stabilize the circulation.

## accessories

### Benefits of training effectiveness and a fun movement training

- >> With the MOTOmed software sequence programs you can train your endurance, strength, coordination, and concentration.
- >> A personal chip card provides for assistance with individual training progress and its analysis (PC printout).
- >> The MOTOmax champion's podium program increases enjoyment of movement.
- >> With the pulse control (cardio function) you are always training with the optimal resistance level.
- >> To reduce circulatory disorders and edema (water retention in the legs), an additional use of the ankle joint adjustment is recommended. Targeted activation of the calf muscle pump effectively supports the diastolic flow and the outflow of lymph fluid while reducing pain and swellings.

2007: 50 Years Company Reck | „Made in Germany“

2008: 27 Years MOTOmed: passive, motor-assisted, and active movement therapy

Imprint:

Editing and layout by: RECK Technik GmbH & Co. KG in cooperation with Thomas Kaiser, certified sport scientist.

# Get Yourself Moving - During Dialysis

MOTomed letto2: passive, motor-assisted, and active motion

New informations:  
[www.motomed.com](http://www.motomed.com)



Profit from periodic movement therapy during dialysis.

Thanks to the MOTomed letto2 you are now able to profit from the positive effects of regular movement without additional time expenditures.

Train easily, safely, and comfortably from your bed or therapy chair. Use the opportunity to improve your strength, endurance, coordination, and flexibility.

Feasible, safe, and intelligent, with special software-sequence programs for individual users.



## Special Features (Functions) of the MOTomed Movement Therapy

Intelligent, software-controlled movement therapy: Safety software: SpasmControl (loosening of cramps) and MovementProtector, foot insertion aid, SmoothDriveSystem, ServoCycling, SymmetryTraining, TrainingAnalysis, selection of 26 languages, pulse controlled ResistanceLevelPrograms, additional TherapyPrograms.

**RECK MOTomed**<sup>®</sup>  
Movement Therapy for a Better Quality of Life

RECK-Technik GmbH & Co. KG, 88422 Betzenweiler, GERMANY  
Reckstr. 1-5, phone +49 7374 18-85, fax +49 7374 18-480  
[contact@motomed.com](mailto:contact@motomed.com), new informations: [www.motomed.com](http://www.motomed.com)



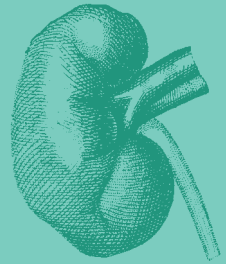
Send this reply card or call us: **phone +49 7374 18-85.**

**Yes,** we are interested in the MOTomed MovementTherapy during dialysis.

We are interested in a free product demonstration. Please contact us.

### Please Send Me the Following Free Information:

- detailed Product overview
- flyer: "Dialysis and Movement" research
- Info flyer: research results "Dialysis and Movement"
- MOTomed sam1 data analysis- and PC analysis program
- flyer: ankle joint adjustment for activation of the calf muscle pump



### Additional MOTomed models



#### MOTomed viva2

- color display
- simple operation
- 26 languages
- therapy programs:
  - SymmetryTraining
  - targeted muscle group-therapy (4-Segment-TherapyProgram)
  - "sam1" PC analysis program incl. chip card
  - champion's podium program
  - electrical stimulation

#### MOTomed gracile

- for children, suitable for narrow hip positions
- smaller foot shell inner distance
- adaptation to growth (pedal axle height adjustment)
- includes all MOTomed viva2 functions

#### MOTomed letto

- TrainCare leg guides with adjustable knee support
- especially beneficial for coma and respiratory patients
- effective prevention of thrombosis, contracture, and decubitus
- use at intensive care units and acute rehabilitation
- easily positioned in front of the bed
- quickly detachable for transportation

## Reply Card

MOTOmed letto2 during dialysis.

stamp

facility

contact person

street

zip code, city

country

phone

e-mail

GB 713-4/W64a 03.09 binSt

To

**RECK MOTOmed®**

RECK-Technik GmbH & Co. KG  
Reckstr. 1-5  
88422 Betzenweiler  
GERMANY

## Reply Card

I am interested in additional MOTOmed models. Please send me free information about.

- MOTOmed viva2 (sitting position)
- MOTOmed gracile (for children)
- MOTOmed letto (the bed unit)

name

street

zip code, city

country

phone

e-mail

GB 713-4/W64a 03.09 binSt

stamp

To

**RECK MOTOmed®**

RECK-Technik GmbH & Co. KG  
Reckstr. 1-5  
88422 Betzenweiler  
GERMANY