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**evocell**®  
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**APPLICATIONS**

# evocell®

MECHANICAL TRANSDUCTION  
for Medicine and Sports

## General information

Several thousand clinical environment applications have shown the high tolerance of the supportive treatment with the evocell II mechanotransduction system. In rare cases, however, mild dizziness or minor headaches are documented. To prevent this from happening, drinking a glass of water (still) before and after each treatment has proven beneficial.

Please do not leave the patient unattended during the initial treatment, but allow him to enjoy a calm and relaxed atmosphere. Due to the different body compositions,

the treatment's success depends on the individually optimal shock wave frequency in consultation with the patient. Two observations can be made that can be useful in daily use:

- < Athletes / sporty people generally prefer higher frequencies (> 20Hz, consequently higher amplitudes), possibly even without a damping mattress
- Frequencies < 20 Hz with a damping mattress are suitable for relaxation

# Treatment

## of chronic, unspecific back pain

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Cave: following various international guidelines, avoiding treatments that promote patients' passivity is the top priority, even in the case of chronically unspecific back pain (if serious causes are excluded, red flags)! To date, physical activity is considered to be the most effective treatment in the medium to long term. Therefore, a passive-relaxing (muscle-relaxing) evocell session should only occur as a supplement and, e.g., be expanded through previous dynamic strength exercises.

Good experiences in the treatment of chronically unspecific back pain were

observed with the following parameters following mobility-oriented training of the hip:

Lying passively | Frequency: 23 Hz | Duration: 15 Min | Subsequently: Frequency: <19 Hz | Duration 5 Min | 3 times a week



Passive Regeneration



Hip External Rotation V1



Hip External Rotation V2



Bird Dog Start



Bird Dog End



Isometric Contraction



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# Treatment

## for supporting Physiotherapy

evocell®II treatment does not replace a physiotherapeutic treatment. Instead, it helps by, e.g., stimulating muscular relaxation and enabling deeper penetration during manual therapies. Physiotherapists can look after several patients simulta-

neously by pretreating patients with prescriptions for manual therapy or massage using evocell before the actual treatment. Besides, various therapies can be supplemented by mechanotransduction treatment, e.g., fango, cold, or electrotherapy.



evocell®II can be used in many ways and was designed to make your work as a physiotherapist easier. Above all, make sure that the patient drinks enough water before treatment.



Compression/Bandaging



Mobilisation



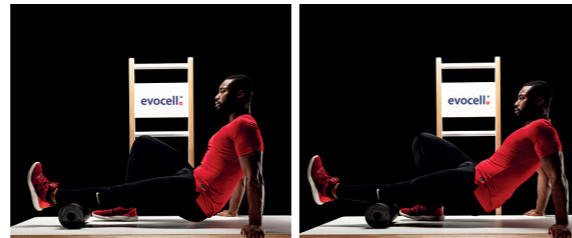
Taping

# Treatment

for the support of muscular discomfort or regeneration

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Shockwave-induced mechanotransduction has been shown to stimulate gene expression (TGF-beta 1 & IGF-1) and tenocytes (literature references: <https://evocell.de/medical-background/scientific-support>). This induces restructuring of the extracellular matrix and also promotes the development of other collagenous structures. As a result, the regeneration of muscular complaints can be supported. Also, mechanical stimuli have a physical loosening effect on hardened structures.



Fascia Training Calf



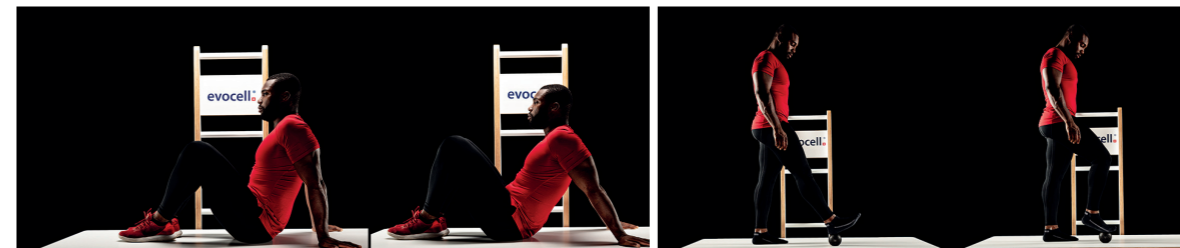
Passive Regeneration



Fascia Training Ischiocrural Muscle



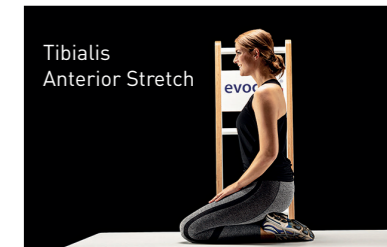
Fascia Training Quadriceps



Training Plantar Fascia



Glutes Stretch



Tibialis Anterior Stretch

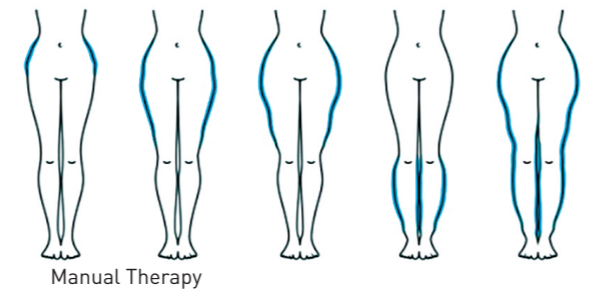


Hip Mobilisation

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# Treatment of Lipedema

evocell®II can be used excellently for the supportive treatment of lipedema. Within the treatment chain, the vessels can be expanded through the shock wave, making manual therapy easier. Further compression treatment of the lower extremities (including thighs) and subsequent bandage lead to remarkable results.



# Treatment of pain patients

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In multimodal pain programs, evocell®II is suitable as a complementary relaxing measure as part of a holistic care concept. The hyperstimulation of analgesics that are induced by extracorporeally initiated mechanotransduction can help relieve pain. Particular attention should be paid to the patient's well-being. As a supervisor, take your time to identify the individual optimal treatment frequency and start with very low frequencies to benefit most from the relaxing effect. Passive, relaxing treatment is usually more promising for pain patients

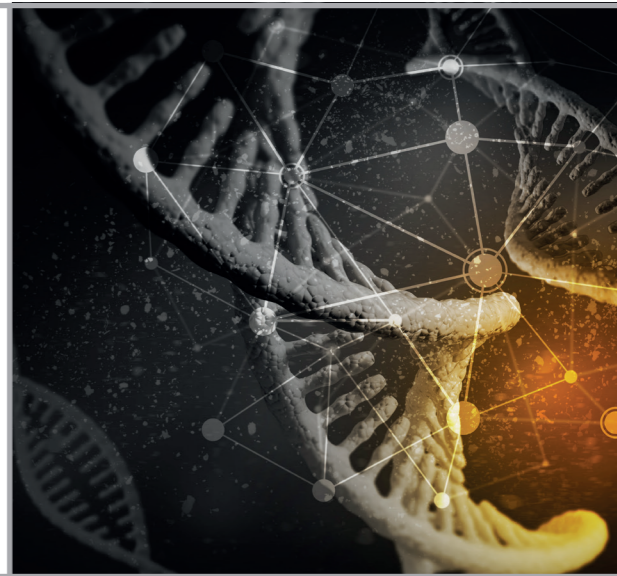


than active work with the evocell. Make sure to point out to the patient that the spectrum of side effects is low, and provide a glass of water before and after the treatment. You should also ensure a comfortable room temperature and a calm atmosphere in a slightly darkened room.



Heat

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# Training with evocell®II

evocell®II supports the achievement of many of your goals (e.g., neuromuscular training, increase in mobility, training of fascia/trunk stability). One of the most demanded in professional sports is the acceleration of (muscular) regeneration.

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