Knee orthosis for dynamic stump redression

The CDS® Knee Brace Amputation is a knee orthosis for the treatment of post-amputation stretch deficits.

The CDS® Knee Brace Amputation is based on the CDS® principle and used to treat an extension deficit of the knee joint. Thanks to the dynamic continuous pull, the brace stimulates the growth of the shortened tissue.

Switch off the spring tension without using a tool, without changing the set spring force.

Continuous adjustment of the extension stop from -15° to +30° to adapt it to the course of the treatment.

The continuously adjustable redression range down to -15° protects against harmful overstretching of the tissue and allows for individual end-to-end stretching.

Easy, continuous adjustment of the spring force.

Large, closed calf shell for uniform pressure distribution.

Length adjustment of the upper and lower leg elements is possible for all sizes.

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Size chart and article numbers

<table>
<thead>
<tr>
<th>Size</th>
<th>Length of thigh shell medial (cm)</th>
<th>Length of lower leg shell (cm)</th>
<th>Thigh circumference (cm)</th>
<th>Stump circumference (cm)</th>
<th>Art.-No. left</th>
<th>Art.-No. right</th>
</tr>
</thead>
<tbody>
<tr>
<td>L/L</td>
<td>23 - 25.5</td>
<td>17 - 25</td>
<td>36 - 66</td>
<td>40 - 46</td>
<td>903LL-L</td>
<td>903LL-R</td>
</tr>
<tr>
<td>LM/M</td>
<td>23 - 25.5</td>
<td>17 - 25</td>
<td>33 - 43</td>
<td>33 - 40</td>
<td>903LMML-L</td>
<td>903LMML-R</td>
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<tr>
<td>S</td>
<td>17.5 - 20</td>
<td>17 - 25</td>
<td>30 - 40</td>
<td>27 - 33</td>
<td>903SS-L</td>
<td>903SS-R</td>
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</tbody>
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CDS® Knee Brace Amputation

For a dynamic life
Therapy of flexion contracture after amputation of the lower leg on both sides

Six months after the beginning of the prosthetic supply, Mr. R. was able to move freely and without aids.

Startig position:
47 year old patient, 9 months after a double transtibial amputation following a sepsis/multiple organ failure. Due to the very critical long-term general condition, no care was taken in the hospital for appropriate stump positioning.

At the first appointment, a flexion contracture of 85° left and 50° right was measured (while sitting). The patient has very short lower leg stumps, the musculature was strongly atrophied and the skin condition was very poor over a large area. The flexion contracture could not be improved just by the two 20-minute physiotherapy appointments every week, and the planned twosided provision of lower leg prostheses was therefore not possible.

Therapy:
Since the physiotherapy alone was not enough, we contacted Albrecht in the search for dynamic joints to achieve the idea of building a dynamic flexion orthosis. After all dimensions had been recorded, the orthosis were made and tested at the customers site by Ms. Mangold. After some small adjustments had been made to the pre-fabricated orthoses, the user could use them immediately. For several hours a day without complications.

After use 4 weeks, a significant improvement was visible and measurable. After 8 weeks the prosthesis for the right side could be built and after 12 weeks the prosthesis for the left side. The user was then able to stand again for the first time and take a few shaky initial steps with a roller frame and underarm support.

At the first appointment the goal was to supply a prothetic unit for both sides for easier transport. However, after 4 weeks of rehabilitation the mobility class had already increased significantly and 6 months after fitting the prostheses the user could walk freely without aids in the indoor and outdoor areas.

The orthopedic technician of the AOK health insurance Resource Centre responsible for this case was also enthusiastic about the results of the orthosis and approved the acceptance of the full cost.

Conclusion:
Instead of labelling the patient as unsuitable for prosthetic provision and leaving him or her in a wheelchair, independent and self-determined mobility could be restored, which means a massive increase in the physical and mental well-being and quality of life of the user and his family.

We would like to thank Albrecht and Ms. Mangold for the great cooperation.

Rudenber, 17.12.2019
Benedikt Böck
Orthopedic Technician

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