

## **The role of static night splinting after contracture release for Dupuytren's disease. A preliminary recommendation based on clinical cases.**

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Recommendations for using a static night splint after surgery are as old as the literature on Dupuytren's. The coachman, M. Demarteau, who was treated with fasciotomy by Dupuytren in his famous lecture of December 1831, afterwards wore a night splint „for another month and an excellent result was achieved“ (D. Elliot, 1990). Yet firm data on the effectiveness of static or dynamic splinting is still missing. Results of the multicenter study initiated 2008 at Massachusetts General Hospital are pending, but for the sake of our patients we should consider what information we already have today. And indeed, a review of available individual cases reveals remarkable results.

We have been using exclusively static night splints, no dynamic splints. The splints aim at maintaining in the long term the extension position that was achieved by fasciotomy. As compliance is probably the most critical factor affecting the results of splinting it is of utmost importance that the splint is easy to apply and comfortable to wear. We are using two types of static splints: In cases where the extension deficit was fully or nearly fully removed, excellent compliance and results have been achieved with FixxGlove, a golf glove like splint that was developed in cooperation with Inocare Austria and Inocare International. In cases with a remaining extension deficit, an individual, adapted splint is used that provides a comfortable silicon bed for the finger. Splints are worn for a period of 6 months after treatment and exclusively at night. Splinting is re-established whenever the fibromatosis is becoming active again. In most cases the patient himself decides whether this is the case.

We believe that this splinting can reduce the risk of contracture recurrence. Cases without recurrence for two or more years have been observed. This is more or less to be expected but much more impressive is the fact that remaining extension deficits measurably improve with splinting. The same applies to nodules and cords which clearly reduce in size and soften when a splint is worn. This is demonstrated on a variety of our patients.

Our experience demonstrates that a comfortable static night splint can support and improve the effectiveness and sustainability of fasciotomy. Splinting seems to enhance the effect of modified biomechanical conditions achieved by fasciotomy. The concept of pathogenesis that understands the disease as fixation of the flexed fingers may also suggest that splinting in extension position might even be prophylactically efficient in avoiding contracture and become a non-surgical therapy.