

Information Leaflet for Health Professionals

Hand Splinting Recommendations and Exercises for Children with Epidermolysis Bullosa



Epidermolysis Bullosa (EB) is a rare genetic skin condition that can cause severe blisters. Frequent blistering can cause scarring and contractures of the hand. Splinting and exercises will not completely prevent the contractures but will maintain function for as long as possible. The child or young person will be the expert in their own condition and can guide the therapist on what works and does not work for them.

Main objectives of splinting in EB;

1. Retain abduction at first web space
2. Prevent pseudosyndactyly at web spaces
3. Prevent recurrent flexion contracture at the fingers

Splinting Recommendations

1. Ensure splinting is carried out in a very clean environment due to increased risk of infection with children and young people with EB
2. Ensure as little friction and handling as possible to reduce the possibility of blistering.
3. Use thermoplastic material.
4. If contractures are too severe, use otoform k silicone mould to gain some extension.
5. Secure splints with a bandage if joints are at risk of blistering.
6. Use soft strapping avoiding finger joints. Contour foam under strapping may allow straps to be tighter without risking skin breakdown.
7. Review at least every three months and please do not discharge as change in hand position can be rapid.
8. When padding is used, provide extra padding, strapping etc. to maintain hygiene
9. Padding or fleecy web can reduce pressure on the skin, but account for additional thickness when moulding to the limb and cleaning the splint.



10. Advise child and/or carers to clean the splint regularly with luke warm soapy water
11. Use a neutral skin moisturiser to minimise friction when fitting the splint to the hand. An emollient already used by the child is preferable.
12. Provide the child with a passive stretch to the point that the child identifies as comfortable or until the skin visibly blanches
13. Provide fine motor skill development activities

Wearing Regime & Exercises

We recommend that splints are worn for 1 to 2 hour periods during the day to provide a passive stretch, maintain optimal positioning and allow opportunity for active movement within comfort. The splints should also be worn overnight unless there is any discomfort, redness blistering etc.

Active and passive range of movements of digits, thumb and wrist are to be encouraged every day to prevent contractures. Regular advice for development of fine motor skills is encouraged.

Wearing Regime & Exercises after hand surgery:

Splinting usually occurs two weeks after hand surgery at the second change of dressing at Birmingham Children's Hospital. At this stage, early active movement is encouraged within the comfort zone followed by passive range of movement of thumb, digits and wrist once fully healed. Passively flex and extend the digits and thumb within patient's comfort zone or to point of immediate blanching. Apply as little pressure to the skin as possible when passively stretching.

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Useful resource:

“Occupational Therapy in Epidermolysis Bullosa, A Holistic Concept for Intervention from Infancy to Adult”. (2012) By Hedwig Weiz & Florian Prinz ISBN: 978-3-7091-1138-3

If you require any further advice please contact the BCH Occupational Therapy Department on 0121 333 9490

This booklet has been developed in collaboration with DEBRA UK



DEBRA is the national charity that supports individuals and families affected by Epidermolysis Bullosa (EB) – a painful genetic skin blistering condition which, in the worst cases, can be fatal. Visit www.debra.org.uk.

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