

## The “Vacsplint” for hands

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A novel technique of applying negative pressure wound therapy to a hand is described. The two foam slabs are placed on the volar and dorsal surface of the hand and forearm with strips between fingers. The slabs are then stapled together from distal to proximal until the level of the proximal interphalangeal joints (PIPJs). The metacarpophalangeal joints (MCPJs) are then flexed to 90°, whilst keeping the PIPJs in extension. The dorsal foam overlying the MCPJs shifts distally and the volar slab proximally by a few centimetres. The two slabs are stapled further in this position. The same principle can be used for wrist extension (Figure 1). The dressing is completed with adhesive occlusive drape and suction tubing. On application of suction, the differential contractile forces acting on either side of the joints (due to the different lengths of foam) result in the dressing assuming a functional position (Figure 2 and Supplementary Digital Content Video 1).



**Figure 1.** Foam stapled in MCPJ flexion with dorsal line on overlying MCPJ's having moved distally in relation to corresponding mark on volar slab. The opposite occurs at the level of the wrist.

### Conflict of Interest

The authors have no conflict of interest.

**Supplementary Digital Content 1.** Video demonstrating the “Vac-splint” assuming the functional position when suction is applied (wrist was not included in this earlier example). This infant had sustained a scald to the hand the previous day.



**Figure 2.** Intra-operative photo of a patient's hand after negative pressure is applied with the hand automatically assuming a functional position.