

Evaluation of a hydrophilic foam with a silicone contact layer versus a traditional foam dressing in the expedience of arterial wound healing

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Problem statement

Arterial wounds are hard to heal secondary due to a lack of blood supply. The wounds “cool” expediently and it takes up to twelve hours for ANY wound to recover enough warmth in order for fibroblasts to form. Foam dressings help provide a warm moist environment whilst still allowing breathability. Unfortunately, pure foam can stick to the wound base and cause more damage during removal. This study examines the expedience of healing and ease of release utilizing hydrophilic foam with a silicone contact layer versus a traditional hydrophilic foam.

Study overview and past treatment and execution

Twenty patients were followed for a period of twelve days. All had arterial insufficient ankle ulcers. All had minimally draining ulcers and had been deemed able to heal secondary to collateral circulatory existence via ABI. Ten were placed on the traditional foam dressing and ten on the hydrophilic with silicone contact layer. All wounds were cleansed with normal saline. All had wound bases with 10% or less necrotic tissue. The dressings were changed every three days. Healing was measured using 10% increments of granulation tissue being measured. Ease of release was measured with any sticking being moistened with saline to prevent granulated tissue destruction.

Findings

The patients in the traditional hydrophilic foam group showed the following:
On day three, nine of the ten had zero

granulation and one had 10% granulation. On day six, six of the ten had zero granulation, two had 10% and two had 20% granulation. On day nine, six of the ten had 10% granulation, three had 20% granulation and one had 30% granulation. On day twelve, eight had 20% granulation, one had 30% granulation and one had 40% granulation. As for ease of release: On day three, ten of ten needed saline to release the dressing. On day six, nine of ten needed saline. On day nine, nine of ten needed saline and on day twelve, seven of ten needed saline to release the dressing.

For patients utilizing the silicone based hydrophilic foam, the following was observed: On day three, six of the ten showed 10% granulation and four had 0% granulation. On day six, nine of ten showed 10% granulation and one had 20% granulation. On day nine, five had 20% granulation, one had 30% granulation and four had 40% granulation. On day twelve, five were observed to have 60% granulation, three had 70% granulation, one had 90% granulation and one had healed. As for ease of release, of the ten over a period of twelve days, none had experience “sticking” of any kind during the entire study.



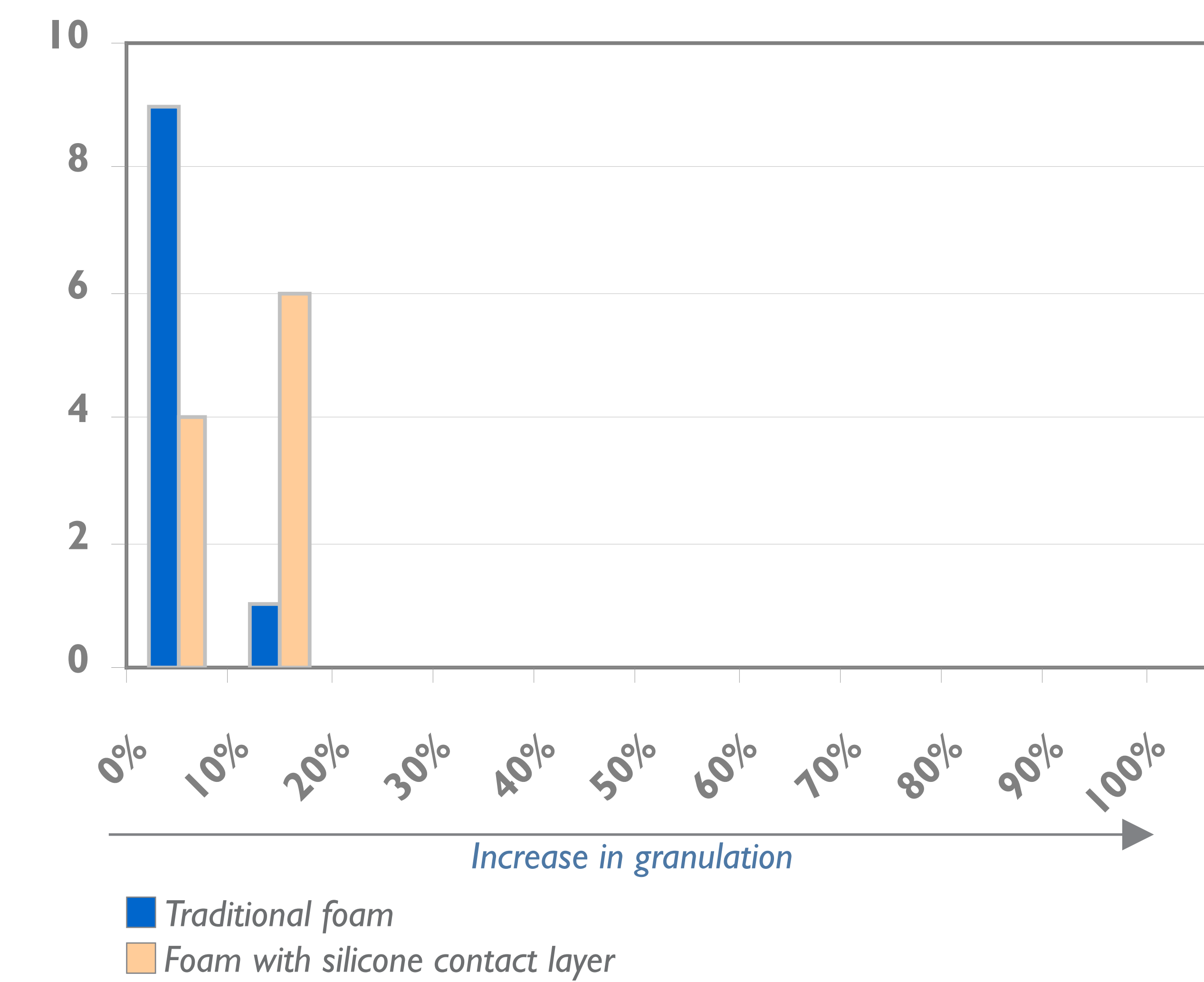
Day 1



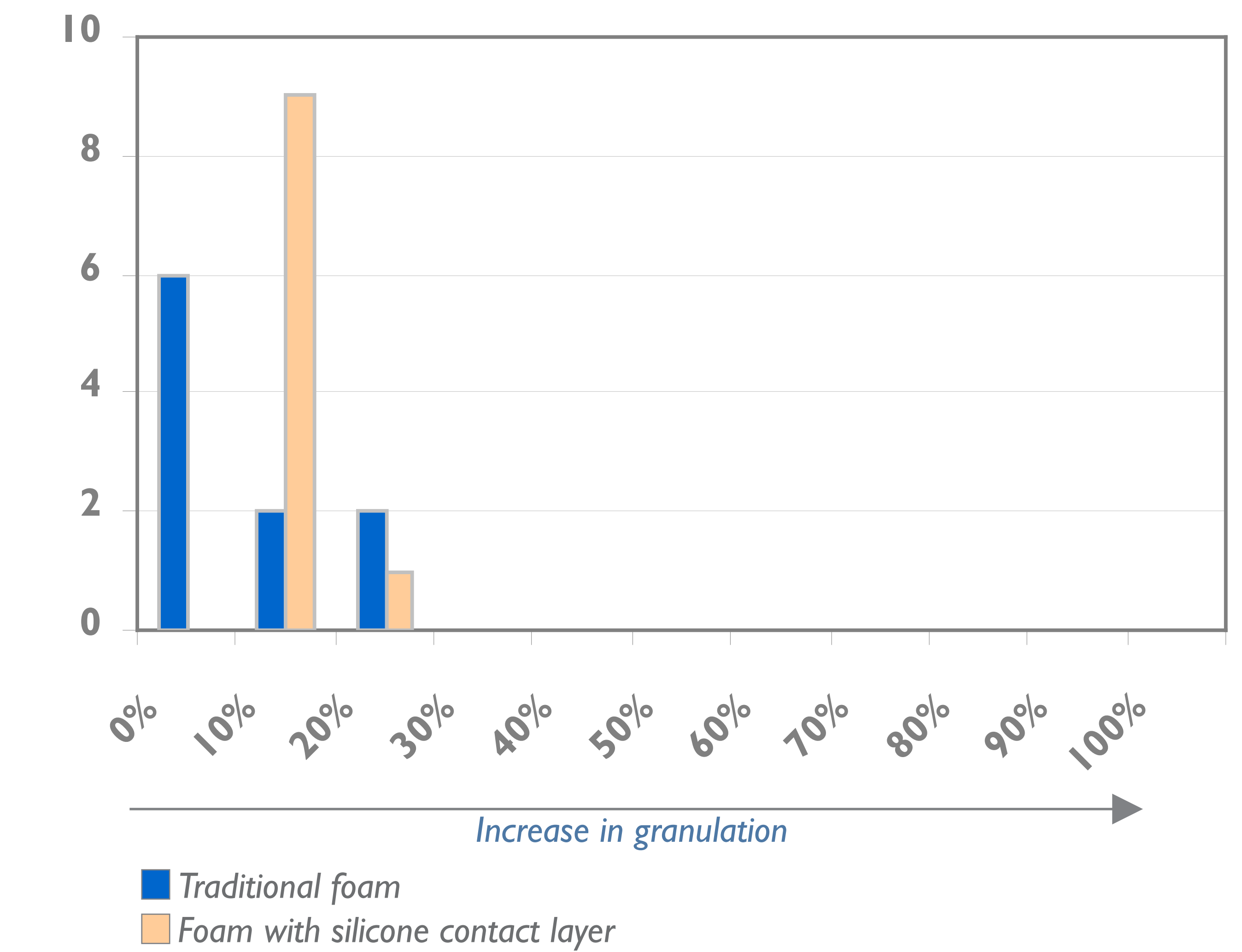
Day 12

Increase in % Granulation tissue rate

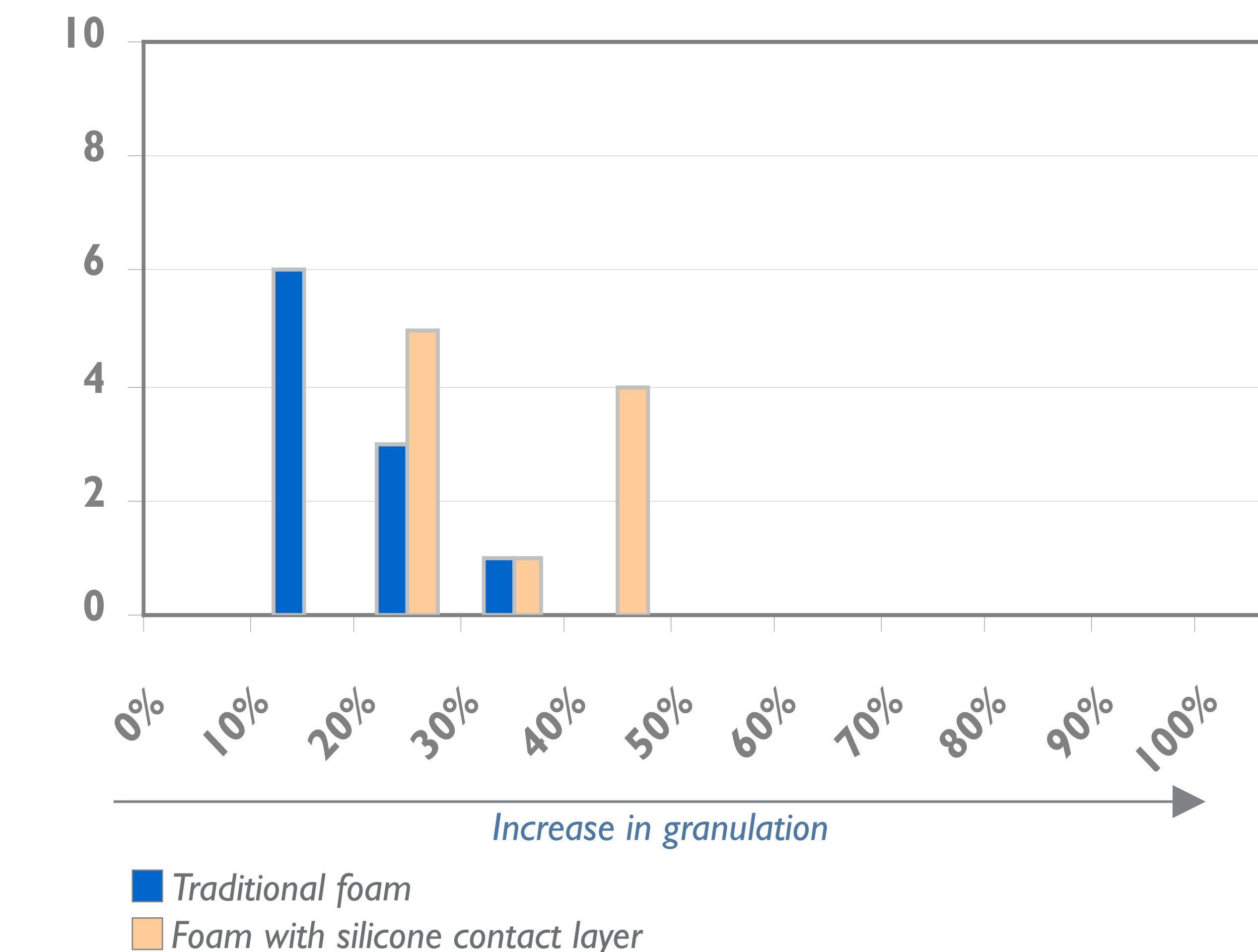
Day 3



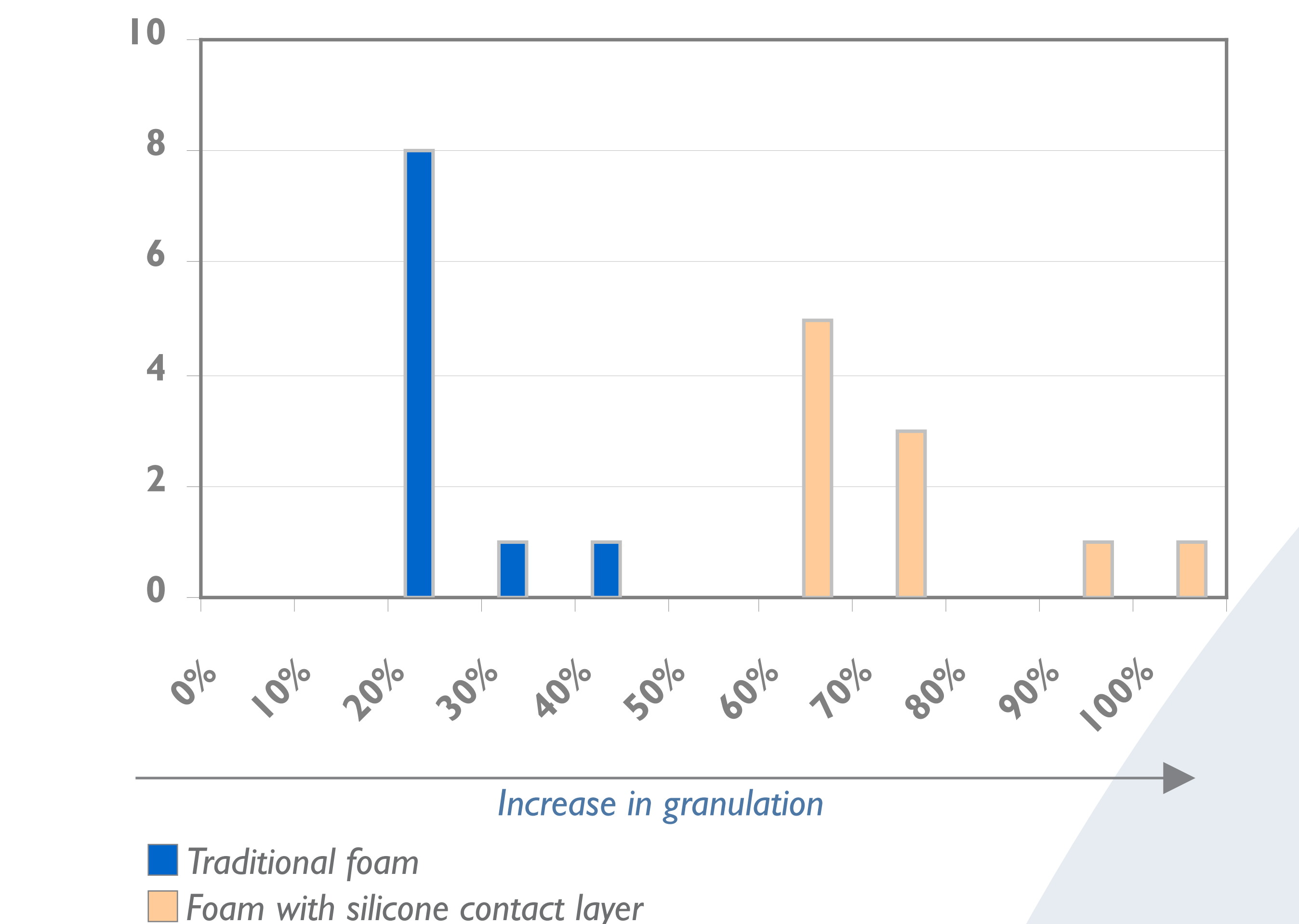
Day 6



Day 9



Day 12



Conclusion

The hydrophilic foam dressing with a silicone contact layer has provided increased healing rates combined with trauma free removal when compared to traditional hydrophilic foams.

*Special thanks to Progressive Home Health and Sherwood Oaks for their participation in this study and for providing the hydrophilic foam, Tielle (Systagenix) and to Advancis Medical for the hydrophilic foam with silicone contact, Advazorb Silfix®.