# The Relative Time to Healing of Forefoot, Midfoot and Rearfoot Wounds Treated with a Total Contact Cast System In A Hospital-based Wound Care Center

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## Introduction

Total contact casting (TCC) is a cost effective, minimally invasive, and effective means with which to treat foot ulcers on the weight-bearing surface of the foot. Our study sought to examine if there was a significant difference in the number of TCC applications needed to effect wound closure between different wound locations, those being of the forefoot, midfoot and rearfoot.

## Methods

The patient population was drawn from a hospital-based wound care center. The same total contact cast system* was utilized for all the patients. All casts were applied by the same physician, and the casts were changed weekly at which time standard local wound care was also administered. Twenty-one wounds that healed with TCC were considered for this study.

## Results

The average starting wound size was 0.772 cm^2 (0.04 to 4.99 cm^2), and the average patient age was 60.24 years (27 to 75). Of those wounds that healed and the respective number of applications needed for full healing, there were 13 forefoot wounds (average 2.923 applications), 5 midfoot wounds (average 3.2 applications), and 3 rearfoot wounds (average 9.333 applications). The overall average was 5.152 applications. One of the rearfoot wounds required 20 applications which skewed the data.

## Conclusion

Total contact casting is the gold standard to offload and heal weight-bearing foot ulcers. Our data demonstrates that TCC can be used to heal rearfoot wounds and that providers can expect results to take longer when treating a rearfoot wound as compared to forefoot and midfoot wounds. If we eliminate the one challenging patient who took 20 weeks to heal, the rearfoot wounds took, on average, one additional application to heal as compared to the forefoot and midfoot wounds. We note that our study did not take into account various variables such as presence of underlying vascular disease, presence / absence of prior wounds and / or amputations, and the like. Our study does recapitulate that TCC is an effective tool in physicians' arsenals to treat wounds on the weight-bearing surface and can be used successfully on wounds of forefoot, midfoot, and rearfoot.

## References


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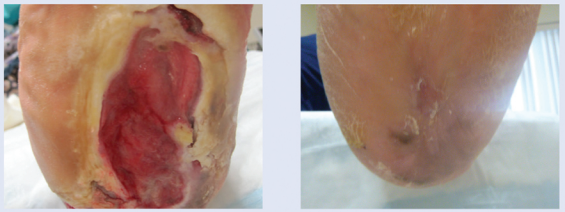
**FIGURE A**



Rearfoot, before and after

**FIGURE B**

Midfoot, before and after

**FIGURE C**

Forefoot, before and after

* Cutimed Off-Loader® TCC System, BSN medical Inc., Charlotte, NC