

# Negative Pressure Wound Therapy on Acute Paediatric Burns

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## Introduction

The ultimate goal of burn wound management is to promote early healing. This has considerable impact on long term appearance of scar and significant economic impact. Many studies have demonstrated Negative Pressure Wound Therapy is effective in the management of skin grafts however there is very little information regarding Negative Pressure Wound Therapy as a primary dressing for the treatment of burn wounds, wound progression and pain management.

## Method

A pilot study comparing Negative Pressure Wound Therapy to usual care.

All children presenting to the Lady Cilento Children's Hospital within 12hrs of initial burns are eligible for the trial.

Laser Doppler imaging used to measure burn wound depth

Wound re-epithelialisation assessed by blinded photo assessment

Pain is measured at multiple stages by nursing staff, parents and patients

Management of dressings from a parents perspective also obtained

Total cost of healing recorded

## Results

This study is still recruiting. Anecdotally, Negative Pressure Wound Therapy is well tolerated. Recruitment will be completed later this year and results presented at ANZBA.

## Discussion

Tissues oedema and coagulation occurs as a result of the burn injury, this appears maximal at 12-48 hours after injury. As a result, this can compromise microcirculation, resulting in progression of the burn injury. Negative Pressure Wound Therapy applied during this time frame may have beneficial effects in halting wound or limiting further wound progression.

## Conclusion

Negative Pressure Wound Therapy is a promising adjunct to current burns wound management

## Key Words

Negative Pressure Wound Therapy, Burns, Paediatric

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